STATE OF SINGAPORE

REPORT OF THE
MINISTRY OF HEALTH

for the year ended 31st December, 1958

BEING THE ANNUAL REPORT ON THE MEDICAL DEPARTMENT
BY THE DIRECTOR OF MEDICAL SERVICES
FOR THE YEAR
1958

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INTRODUCTION

To The Honourable Mr. A. J. Braga, M.L.A.,
Minister for Health,
Singapore.

Sir,

I have the honour to submit a report on the state of the Medical and Health Services in Singapore for the year ended 31st December, 1958.

GENERAL REVIEW

2. Government's Statement of Policy on Malayanisation was published as a White Paper (Sessional Paper No. Cmd. 65 of 1956) in December 1956. It was hoped that expatriate officers, particularly those holding senior posts, would remain for the full period of retention which varied between one and ten years. This hope has not been realised and the large majority of expatriate officers have left the service. At the present time only three senior posts are filled by expatriate officers on the permanent establishment and subject to the policy of Malayanisation.

3. This rapid programme of Malayanisation has thrown a considerable strain on the resources of the Department, and the position has been further aggravated by the retirement or resignation of certain senior local officers including the Permanent Secretary to the Ministry of Health, the Senior Ophthalmic Surgeon and the Ear, Nose and Throat Surgeon. During 1959 two other senior officers reach the age of retirement and will leave the service, the Assistant Director of Medical Services (Tuberculosis) and the Senior Pathologist.

4. It will be appreciated that these resignations and retirements will create a very difficult situation in the senior branches of the Department during 1959, particularly at a time when there is an acute shortage of staff in all fields. This shortage is particularly marked in the Nursing Service. It has proved impossible to open new ward blocks during 1958 because of lack of nursing staff at a time when there is a grave shortage of hospital beds in Singapore. It is impossible at the present time to step up the training programme because of the grave shortage of Sister Tutors. During 1958, of an establishment of 15 Sister Tutors, only four posts were filled.

STAFF POSITION

5. The approved establishment and the number of vacancies at the end of 1958 is shown in Table 1.

Primary Examination of the R.A.C.S.

6. Through the generosity of the Australian Commonwealth Government it has again been possible under the Colombo Plan for the Royal Australasian College of Surgeons to conduct a Primary Examination for the Fellowship in Singapore during March/April of this year. Beginning the 17th February, 1958 and concluding on the 18th March, 1958 an intensive course of lectures in Anatomy, Pathology and Physiology was conducted by Australian lecturers to prepare candidates for the Primary Examination. The lecturers for the preparatory course were Mr. H. H. Eddey, Examiner in Anatomy

and Surgery, University of Melbourne, Professor G. S. Christie, Associate Professor of Pathology, Melbourne University and Mr. R. H. Hawker, Senior Lecturer in Physiology, University of Queensland. The Primary Examination was conducted by Professor E. S. J. King, Professor of Pathology, University of Melbourne, Professor S. Sunderland, Dean of the Faculty of Medicine and Professor of Anatomy, University of Melbourne, Dr. F. C. Courtice, Director of the Institute of Pathology, Sydney Hospital, and Mr. P. J. Kenny, Lecturer in Surgical Anatomy, University of Sydney.

TABLE 1

PROFESSIONAL STAFF POSITION OF MEDICAL DEPARTMENT
31ST DECEMBER, 1958

MEDICAL OFFICERS

———	Grade *C*	Grade *D*	Grade *E*	Grade *G*	Senior Registrars	Medical Officers	Housemen
Approved Establishment ..	1	1	12	35	30	211	50
Number of vacancies at 31–12–58	..	..	3	20	16	6	..
Number of officers on overseas study leave at 31–12–58 ..	..	..	..	..	..	27	..
Effective personnel at 31–12–58	1	1	9	15	14	178	50

NURSING STAFF

———	MATRONS			Sisters	Staff Nurses and Student Nurses
	Principal Matron	Grade I	Grade II		
Approved Establishment ..	1	5	11	199	1,038
Number of vacancies at 31–12–58 ..	..	2	4	60	178
Number of officers on overseas study leave at 31–12–58	..	..	..	4	11
Effective personnel at 31–12–58 ..	1	3	7	135	849

ANCILLARY STAFF

———	Radiographers	Physiotherapists	Occupational Therapists	Almoners
Approved Establishment ..	29	18	9	28
Number of vacancies at 31–12–58	15	..	5	7

7. A total of 36 doctors and four dentists undertook the Primary course of study, of whom 19 were from the Singapore Medical Department and were sponsored by the Government of Singapore. A total of 35 sat for the Primary Examination in March/April and of these 13 were successful, of whom six were employed in the Department. .

Institute of Health

8. The people of the United Kingdom presented to the people of Singapore on the 14th May, 1958 a unique institution known as the Institute of Health costing approximately $1.5 millions, which unifies within one building all preventive health aspects of children including children of school-going age, instruction of medical and para-medical personnel and research facilities pertaining to numerous health problems.

Training of Nursing and Auxiliary Personnel

9. During the year 159 student nurses entered the training school and 144 nurses passed the Final Examination of the Singapore Nursing Board. Four nurses went to the United Kingdom and Australia on post-basic scholarships, and a further two nurses went to New Zealand on Sister Tutor Courses.

10. The psychiatric nurse training at Woodbridge Hospital continues to make good progress in spite of a shortage of female nurses. During the year 12 female and 19 male nurses commenced training. At the same time there were nine staff nurses undergoing psythiatric training. This increase in staff has resulted in an improvement in the staffing of this hospital.

11. The General Nursing Council for England and Wales in November gave official recognition to the Mental Nurses training at Woodbridge Hospital. This recognition means that nurses trained at Woodbridge Hospital can now be registered by the Council. This recognition has naturally given great encouragement to the teaching staff at the hospital.

12. The training of Assistant Nurses has continued to make excellent progress. During the year 110 students were accepted for training by Tan Tock Seng Hospital and 29 Assistant Nurses passed the Final Examination of the Singapore Nursing Board. Two trained Assistant Nurses went to the United Kingdom on six months N.A.P.T. Scholarships.

13. The Midwifery training has been maintained and during the year 60 pupil midwives and 59 trained nurses started this midwifery training at Kandang Kerbau Hospital, and 36 pupil midwives and 35 trained nurses passed the Final Examination of the Central Midwives Board, Singapore.

14. The first local course for the training of Health Visitors was started by Miss M. Sankey of the World Health Organisation with eight candidates. The final examination was held in July under the auspices of the Royal Society of Health, London, and six of the candidates were successful. Miss Sankey left Singapore in August. A District Nursing Course was started by Miss M. Chalmers, also of the World Health Organisation for those nurses who had passed the examination for Health Visitors. The District Nurses Examination was held in December 1958.

15. During the year we had in addition the services of three other World Health Organisation experts, Miss J. McLarty, Miss M. Lange and Miss D. Potts, who assisted in nursing administration and post-basic courses. Miss Potts left Singapore in October.

Sanitary Inspectors

16. Since 1921 a course of training for Sanitary Inspectors has been carried out in Singapore leading to the Certificate of the Royal Society for

the Promotion of Health. The course of training was given previously in part of the Government Health Office, but the opening of the Institute of Health in May 1958 has meant greatly improved teaching and training facilities. Thirty-six Sanitary Inspectors passed the examination of the Royal Society of Health in November 1958.

Ancillary Staff

17. During 1958 eight pupil almoners were under training locally and none qualified this year. Five pupil occupational therapists and six pupil physio-therapists were overseas under training in 1958; in addition one almoner proceeded on a one year's training course in the United Kingdom.

PREVENTIVE AND SOCIAL MEDICINE

General

18. It is expected that in 1959 three Rural District Councils will be established. In anticipation of this, decentralisation of the environmental rural health services was undertaken during the past year.

19. Rural sanitation has continued to receive particular attention. During the year 12 new villages were brought into the scheme of rural sanitation, bringing the total to 54 villages.

Health Education

20. Programmes of health education were continued during 1958. Radio broadcasts were made every Sunday during the earlier part of the year and weekly film shows were held throughout the year in the rural area.

21. A course of training in health education for teachers, medical students and para-medical personnel was given during the year. In-service training was given to a number of departmental officers who were specially instructed in methods and media of health education.

22. The Health Education Section took part in many exhibitions during the year. A major effort of the Department was the World Health Day Exhibition when during April 1958 exhibitions were held simultaneously at eight centres all over the island. The theme was 'Ten Years of Health Progress' and besides showing developments in international health, emphasis was laid on the great improvement in health in Singapore over the previous ten years.

23. Other exhibitions in which the Health Education Section participated included exhibitions sponsored by the Department of Information Services entitled *Our Singapore* and exhibitions sponsored by the City Council in connection with their Anti-litter, Anti-pest and Anti-spitting Campaigns.

School Health Service

24. The school population increased from 260,444 students in 1957 to 295,481, an increase of over 13 per cent. The number of schools at the end of 1958 was 702 including 107 private schools. With the large number of schools coming into the Government's Grant-in-Aid Scheme over the past two or three years, there has been a very great improvement in the environmental hygiene of school premises. Up to the end of the year 74,058 were examined. This represents 23.65 per cent of the school population. During the year 528 of the 595 Government and Government Aided schools had been visited by school health officers for the purpose of school medical inspection.

25. The School Health Service also runs minor treatment clinics at four centres on the island. 95,106 school children attended these clinics, an increase

of 8 per cent over the previous year. In addition a school travelling dispensary was available for the treatment of children attending rural schools; over 17,000 children were treated by this travelling dispensary.

26. In April the School Tuberculosis Service was integrated with the Tuberculosis Service of the Colony.

Maternal and Child Health Services

27. The Rural Maternal and Child Health Service was awarded the Kettering Shield by the National Baby Welfare Council, London, in their overseas competition for outstanding work in the field of Maternal and Child Welfare. The Shield was presented to Dr. (Mrs) R. Calderwood, the Lady Medical Officer in charge of the Maternal and Child Welfare Service, by the Minister for Health, the Hon'ble Mr. A. J. Braga, on behalf of the National Baby Welfare Council at a ceremony held at the Institute of Health on 16th October, 1958.

28. The Maternal and Child Health Service has now 20 main clinics with resident staff, 25 visiting clinics with no resident staff and eight village midwife centres with a resident midwife in each.

29. As well as providing a full domicilary midwifery service a full immunisation service is provided for infants and pre-school children. The drive against diphtheria continued, and during the year over 18,000 children were fully immunised and 8,200 received booster doses. The poliomyelitis epidemic between October and December naturally interfered with the immunisation campaign.

Social Diseases

30. The Domiciliary Midwifery Service is assisted by two mobile Social Hygiene dispensaries. Specimens of blood are taken for serological tests and vaginal discharges examined. Where necessary treatment is carried out. The positive rate for syphilis in this ante-natal group was only 0.7 per cent amongst 10,000 women examined which is the lowest figure ever recorded and compares very favourably with the rates published in better developed countries in the world.

31. The total number of cases of venereal disease diagnosed and treated and the total attendances at the V.D. clinics in Singapore over the past three years has been—

	1956	*1957*	*1958*
V.D. cases	4,803	5,452	5,233
Syphilitic infections ...	1,011	1,048	878
Gonorrhœa	2,584	2,856	2,808
Total attendances	185,452	190,549	197,333

Mental Health

32. Woodbridge Hospital is situated in the outskirts of the City and is the centre of the Mental Health Service. This hospital has a total bed strength of 2,040 beds and at the end of the year there were 1,643 patients compared with a total of 2,269 at the end of 1957. The number of admission for the year was 1,552, compared with 1,853 the previous year.

33. There was a reduction of 626 patients in the hospital at the end of 1958 compared with 1957. This does not mean that there is any reduction in the incidence of mental illness in Singapore but due to the implementation of a new policy based on the accepted theory that the best therapeutic agency in very many cases is the environment from which the patient originated, i.e. the therapeutic effect of community life plus where indicated attendance at

psychiatric out-patient clinics rather than incarceration for long periods in a mental hospital which reduces the capacity of the patient for social re-adjustment.

34. It is still considered that there should be a second mental hospital in Singapore in order that existing personnel may be used to best advantage along modern lines for those patients still requiring institutional care.

35. Four Psychiatric out-patient clinics holding six sessions per week were in operation throughout the year. As may be imagined the work of these clinics has increased with the implementation of the hospital policy outlined above.

ENDEMIC AND EPIDEMIC DISEASES

Malaria

36. No case of malaria of indigenous origin was reported during the year. Singapore continues to enjoy freedom from malaria but only as a result of constant vigilance on the part of the Health Department. The island of Singapore is potentially malarious and ideal for the breeding of dangerous malarial vectors.

37. *Aedes Control at the International Airport, Singapore.*—It is necessary to maintain strict ædes control around the International Airport as Singapore is a yellow fever receptive area. A special health team ensures control within the area 880 metres from the airport perimeter fence; control is maintained by residual spraying, swing fogging, clearing of secondary vegetation and the filling of tree holes and bamboo stumps. Rigorous check surveys ensure that the control is being carried out satisfactorily. Aedes ægypti index was nil on each of the four major surveys carried out. The Aedes albopictus index is now 1.56 per cent. In November 1954 the Aedes ægypti index was 6 per cent and the Aedes albopictus index 33 per cent.

Poliomyelitis

38. A major outbreak of poliomyelitis occurred in Singapore beginning in August and continuing until the end of the year. The only causative virus identified was Poliomyelitis Type I. The cases reported were as follows:

	Cases
August	6
September	32
October	168
November	121
December	75.

39. The Government started a programme of mass vaccination with live attenuated virus using the Sabin vaccine. In roughly four weeks in November and December over 200,000 children were immunised. Studies are now in progress to assess the effect of this vaccination programme on the course of the epidemic.

HOSPITALS, CLINICS AND OTHER CURATIVE SERVICES

General Hospital

40. The General Hospital remains the only hospital in Singapore for the treatment of acute medical and surgical conditions. It has a bed strength of 1,191. During 1958 the admissions to the hospital totalled 36,852, compared with 34,623 in 1957.

41. During the year the construction of an Ambulance Station and the conversion of two wards into a modern Physiotherapy Unit was completed. At the end of the year work was in progress of a block of quarters for Sisters and Matrons, a Burns Unit and a block of quarters for Housemen.

Kandang Kerbau Hospital

42. Kandang Kerbau Hospital is the only hospital in Singapore dealing with obstetrical and gynæcological cases. There are 276 obstetrical beds and 40 gynæcological beds, but in spite of this small number of beds, births in hospital averaged 2,500 per month.

43. This hospital also provides facilities for training in midwifery and gynæcology for the Faculty of Medicine of the University of Malaya. It also trains midwives for the examination of the Central Midwives Board.

44. The hospital also provides a full out-patient service for ante-natal and post-natal and gynæcological conditions together with separate general out-patient service for women and children.

45. The following table summarises the work of the hospital during 1958, compared with the same period in 1957.

	1957	*1958*
Total number of cases admitted ...	35,832	39,480
Total number of maternity admissions ...	30,747	33,491
Total number of deliveries	27,765	30,146
Total number of gynæcological admissions	5,085	5,989
Total attendances at the out-patients unit ...	106,233	105,561
Domiciliary Delivery Service—deliveries ...	1,515	1,578
Domiciliary Aftercare Service—cases ...	8,128	9,104

46. During the year the work on the new Matrons' and Sisters' quarters was completed. Further work on the extensions to this hospital is in progress. Block E is being remodelled into a gynæcological wing with 130 beds with two large twin theatres and one minor threatre. A central sterile supply unit adjacent to this wing is also under construction. In addition the central kitchen, boiler house and bulk store are being re-constructed.

Tan Tock Seng's Hospital

47. During the year the out-patient department treated 2,790 new cases of active pulmonary tuberculosis. The total attendances, including re-visits, were 364,272.

48. In July 1958 a team of experts from Australia arrived in Singapore under the Colombo Plan to conduct a tuberculosis case finding programme in Singapore. The team consisted of Dr. S. Cotter Harvey, a chest physician, Dr. C. Rubinstein, a radiologist, Miss G. M. J. Rodda, a bacteriologist, and Mr. D. J. Grant, a radiological engineer. This team was ably assisted by local staff and carried out the survey over a period of four months. During this period a mass X-ray examination was made of 50,000 persons, 40,000 in two crowded urban areas and 10,000 in two rural areas. All cases showing signs of tuberculosis were fully investigated. The figures are being compiled and it is expected that the full results of this survey will be published in 1959.

49. The proposed Assistant Nurses' hostel which was included in the Medical Plan for Tan Tock Seng Hospital had to be postponed on the grounds of economy. This postponement has necessitated converting one of the two new ward blocks into an Assistant Nurses' Hostel and Training School to accommodate 200 assistant nurses.

50. During the year work on the new kitchen and boilers was completed. Two new ward blocks were finished about the middle of the year.

Trafalgar Home, Leprosy Settlement

51. Trafalgar Home is reserved solely for the treatment of leprosy and has accommodation for about 1,000 patients. There is a male and female infirmary for those acutely ill and a ward of 20 beds for patients suffering from pulmonary tuberculosis in addition to Hansen's disease. There is also a ward for the chronically ill patients. The remainder are housed in small huts within the settlement.

52. The Medical staff consists of the Medical Superintendent and three doctors. The nursing care is provided by five hospital assistants and sisters of the Franciscan Order.

53. As the disease can be of considerable duration, occupational therapy is of great importance. This work is supervised by an Occupational Therapist.

54. There is an out-patient clinic situated about $7\frac{1}{2}$ miles away from the home for the follow up of discharged patients and to which cases can be referred from general out-patient clinics. There are at present about 3,000 patients on the register at this out-patient clinic.

Out-patient Services

55. This service is responsible for all the static and mobile out-patient clinics throughout the Island. Under the supervision of the Service are also certain specialised out-patient clinics for Police, prisoners and other special groups. A total of 1,560,222 patients were seen by the out-patient service and of these 411,613 were new cases. There was an increase of 24 per cent over the figures for the previous year.

56. Two new out-patient clinics are being built at Pegu Road and Bukit Panjang. These are based on a standard plan and will cost about $100,000 each. Each clinic will be large enough to treat about 500 patients daily and are expected to be ready for opening to the public by January 1959.

Opium Treatment Centre

57. This Centre which is situated on St. John's Island was established in 1955. The treatment of opium addiction covers three phases. First the phase of the withdrawal of the drug is carried out in the local prison hospital. The second or rehabilitation phase is carried out at the Opium Treatment Centre on St. John's Island. The third stage is that of follow up after discharge, and for this purpose a clinic is held regularly at the General Hospital.

58. During the year there were 399 admissions to St. John's Island and this included the encouraging figure of 42 volunteer patients. 324 convicted inmates and 41 volunteers were discharged from St. John's Island. 656 patients were seen at the follow up clinic at the General Hospital.

DENTAL SERVICE

59. The establishment of this section has posts for 42 dental officers; 35 of these posts are filled. The work of the section is divided into clinical dentistry and preventive dentistry.

60. *Clinical Dentistry.*—During 1958 there was an expansion of the service with the opening of a large school dental clinic at the new Institute of Health. Four dental officers were put to work in this clinic at the start. With the return from study leave of a dental officer who has obtained the D.Orth. R.C.S. (Eng.) an orthodontic section in this clinic has been opened.

61. The other school dental centre at Tan Tock Seng's Hospital continued its work and school children were also given systematic dental treatment at four dental clinics located at the schools and manned by five dental nurses under the supervision of dental officers. Three mobile dental clinics provided treatment for several schools in the rural areas.

62. There was no definite expansion in the hospital services though the Dental Clinic at the General Hospital had to cope with an increasing demand for dental treatment. The chronic sick at the Woodbridge Hospital, Trafalgar Home and Tan Tock Seng's Hospital were attended to by one dental officer.

63. In the Maternal and Child Health Division the number of dental clinics serving expectant and nursing mothers and their toddlers was increased with a new clinic at the Prinsep Street Maternity and Child Health Clinic. This new clinic was the first one established in the City area. Three dental clinics, located at the Sims Avenue Community Centre, Bouna Vista Community Centre and the Siglap Community Centre continued to provide treatment to under-privileged children attending some 15 Social Welfare Centres throughout the island.

64. Treatment was provided as before for the rank and file of the Singapore Police Force and the Royal Malayan Navy, and prisoners in Changi Prison. The three mobile dental clinics continued to extend treatment to children at the St. Andrew's Orthopædic Hospital, Boys Town, the Blind School and the Lee Kuo Chuan Salvation Army Nursery.

65. *Preventive Dentistry.*—Towards the end of 1957 the City Water Engineer announced the fact that the entire municipal water supply in Singapore had been successfully fluoridated, and therefore 1958 marked the first complete year of fluoridation in Singapore. During January and February the fourth annual dental survey in connection with the fluoridation scheme was carried out. This survey helps in assessing the efficacy of fluoridation in controlling tooth decay.

GOVERNMENT MEDICAL STORE

66. The Store dealt with slightly over 8,000 requisitions during the year compared with 6,600 in 1957. Due to improvements in hospital facilities and increase in attendances at dispensaries and clinics the total value of drugs, pharmaceuticals, surgical dressings, instruments, ward equipment, etc. issued by the Store to all establishments rose to $2,596,000. Of this about two-thirds represents drugs and pharmaceuticals, the balance being dressings, equipment and sundries. The organisation for central importing and distribution of these supplies operated smoothly throughout the year. In addition to these issues, raw materials and containers to the value of $580,000 were issued from the Store to the pharmaceutical manufacturing laboratories in the same premises at Silat Road for conversion into manufactured pharmaceuticals.

67. This year the Store supplied for the first time the requirements of the City Council dispensaries which mounted to a further $120,000 worth of medicines and equipment. In addition supplies were made as usual to S.A.T.A., the University of Malaya and a number of other non-Government institutions and these stores amounted to $89,000.

68. In the pharmaceutical laboratories, another increase in overall production was achieved and the principal items in the output of pharmaceuticals were:

Ampoules ...	...	535,000
Eyedrop/Eardrop Vials	...	44,000
Ointments ...	...	11,000 lb. and 71,000 tubes
Tablets ...	...	55 millions
Transfusion Fluids	...	74,600 bottles.

69. Although the production at the laboratories has increased very greatly, particularly in the packing of 'Wets' and ointments, the staff engaged in this work was reduced slightly during the year. The laboratories are now well equipped and during the year under review a new Rotary tablet machine, a large mixing machine and a filterpress for the packing of transfusion fluids were purchased.

CIVIL DEFENCE

70. During the year 1958 the Civil Defence Section continued its activities along the lines of previous years. The Singapore Hospital Reserve was formed in 1952 and the training carried out aims at supplementing with trained personnel the nursing and hospital staff of all hospitals in Singapore in time of war or any civil emergency.

71. At the beginning of the year the strength of the Hospital Reserve was 887, but with only 91 enrolments and 224 resignations, it was reduced by the end of the year to 754, made up of 541 Nursing Auxiliaries and 213 in the General Duties Section.

72. *Training.*—Sixty-seven Nursing Auxiliaries are still undergoing the first phase of training in the various wards at the General Hospital. Another batch of 25 who have passed their 'B' Course Examination will soon be completing their 20 hours of ward duties in preparation for the 'A' Course.

73. During the period under review nine Nursing Courses (five 'A' and four 'B') were held. 66 men and women were successful in obtaining 'B' badges and 35 'A' badges of Efficiency, while another six Nursing Auxiliaries qualified as Volunteer Instructors to conduct 'B' and 'A' classes at the Hospital Reserve Classroom, at the Civil Defence Headquarters in Kolam Ayer.

74. *Emergency Duties.*—Members of the Hospital Reserve gave very valuable assistance in nursing and other general duties during the mass evacuation of Dutch subjects from Indonesia at the beginning of the year. In April they again gave voluntary service at the Geylang English School which was used temporarily to house the persons left homeless as a result of the destructive fire at Lorong 3. During the immunisation campaign against poliomyelitis, nursing auxiliaries assisted at two of the centres.

75. At the end of October and the beginning of November a combined civil defence exercise was held and members of the Hospital Reserve participated to man the hospital and First Aid Post services required during the exercise.

VOLUNTARY AND CHARITABLE INSTITUTIONS

St. Andrew's Mission Hospital.

76. This hospital has 60 beds for children and during the year admitted 872 patients. The out-patients treated during the year were 50,438.

Kwong Wai Siu Free Hospital (Chinese)

77. This hospital has 445 beds and during the year 1,381 patients were admitted. Out-patient attendances were 30,611.

Royal Singapore Tuberculosis Clinic

78. The past year has been another busy year for this voluntary organisation. During the tuberculosis case finding survey this organisation assisted in the examination of a proportion of the cases discovered by X-ray. This clinic has no accommodation for in-patients, and during 1958 a total of 222,143 out-patient attendances were recorded.

79. The Medical Advisory Council met several times during the year and made recommendations on such matters as Silicosis and other Dust Diseases, Compulsory Inoculation of Children against Diphtheria, Island-wide Inoculation against Cholera, etc. Further amendments to the Food and Drugs Regulations were also under consideration.

80. I append herewith a Table (Table 2) showing the number of professional officers available for work of the Ministry on 1st January, 1959.

I have the honour to be,
Sir,
Your obedient servant,

M. DORAISINGHAM, O.B.E.,
L.M.S. (Singapore), D.P.H. (London),
Director of Medical Services,
Singapore.

TABLE 2

TOTAL NUMBER OF OFFICERS AUTHORISED AND AVAILABLE 1ST JANUARY, 1959

——	Estimates 1959	Permanent	Short contract and temporary	Gone or going on leave (Including) study)	Total to be available
A.—Administration					
Director	1	1	..	..	1
Deputy Director ..	1	1	..	..	1
Deputy Secretary (Administration)	1	1	..	..	1
A.D.M.S. (Health) ..	1	1	..	..	1
A.D.M.S. (Hospitals) ..	1	1	..	..	1
A.D.M.S. (Tuberculosis) ..	1	1	..	..	1
Medical Superintendent, General Hospital ..	1	1	..	..	1
Medical Superintendent, Kandang Kerbau Hospital	1	1	..	..	1
Medical Superintendent, Tan Tock Seng's Hospital ..	1	1	..	..	1
Medical Superintendent, Woodbridge Hospital ..	1	..	1	..	1
Medical Superintendent, Trafalgar Home ..	1	1	..	..	1
Medical Superintendent, Thomson Road Chronic Hospital	1	..	..	..	..
Chief Dental Officer ..	1	1	..	..	1
Senior Medical Officer, Social Hygiene	1	..	1	..	1
Superintendent Pharmaceutical Chemist	1	1	..	..	1
Senior Pathologist ..	1	1	..	..	1
Senior Health Officer ..	1	1	..	..	1
Deputy Medical Superintendent Woodbridge Hospital	1	1	..	..	1
Medical Officer in-charge Outpatients Department ..	1	1	..	..	1
Health Officer i/c Schools ..	1	1	..	..	1
Health Officer i/c Maternal and Child Health Services (Rural)	1	..	1	..	1
Principal Matron ..	1	1	..	..	1
B.—Hospitals Division					
Specialist Officer, Grade 'E'	6	6	..	..	6
Specialist Officer, Grade 'G'	24	12	5	..	17
Medical Officer including Senior Registrars (excluding Housemen)	221	124	70	27	167
Housemen	50	50	..	..	50
Matrons	14	7	1	..	8
Sisters	186	57	62	4	115
Nurses*	969	724	114	10	828

* Excludes Assistant Nurses.

TABLE 2—*continued*

——	Estimates 1959	Permanent	Short contract and temporary	Gone or going on leave (Including) study)	Total to be available
B.—Hospitals Division—contd.					
Hospital Assistants ..	327	217	29	8	238
Dispensing Assistants ..					
Qualified Midwives* ..	99	26	44	..	70
Dental Officers (including Housemen)	40	31	5	3	33
Pharmaceutical Chemists ..	2	1	..	..	1
Pharmacists	23	18	2	2	18
Laboratory Assistants ..	93	76	4	..	80
Male Nurses	13	4	3	..	7
C.—Health Division					
Health Officers	32	11	21	..	32
Health Education Officers ..	2	1	..	..	1
Public Health Engineer ..	1	1	..	..	1
Supervisor of Public Health Works	1	..	..	..	..
Chief Sanitary Inspector ..	1	1	..	..	1
Sanitary Inspectors ..	7	6	..	..	6
Matrons	2	1	1	..	2
Health Sisters	15	7	7	..	14
Health Nurses	78	10	45	..	55
Hospital Assistants ..	21	12	4	..	16
Qualified Midwives ..	104	42	40	..	82
Assistant Health Nurses ..	20	18	1	..	19

PART I

GENERAL

Chapter One

LEGISLATION

81. Much legislation was being planned and introduced during 1958. Four Ordinances were passed during the year and another two were placed before the Assembly in the forms of Bills. It is expected that this legislation will be approved early in the new year.

Hospitals Board (Amendment) Ordinance, 1958 (No. 15 of 1958)

82. This Ordinance is the result of the administrative re-organisation in changes in departmental titles in the Treasury and in the Ministry of Health. The Bill substitutes 'a Deputy Secretary (Treasury)' for 'the Deputy Financial Secretary' and 'the Assistant Director of Medical Services (Hospitals)' for "the Chief Medical Officer' respectively.

Quarantine and Prevention of Disease (Amendment) Ordinance, 1958 (No. 19 of 1958)

83. In pursuance of the Government's programme in connection with tuberculosis, a Central Registry under the direction of the Assistant Director of Medical Services (Tuberculosis) has been set up and this amending ordinance enables the Registry to carry out functions in connection with obtaining all particulars of persons suffering from or who have died from tuberculosis. The amendment makes it obligatory of medical practitioners to notify the Assistant Director of Medical Services (Tuberculosis) of cases of tuberculosis; these were formally notified to the Health Officer of the local authority. The form of notification has been amended to give more complete and fuller details of the patient and information in respect of radiologic and laboratory examinations done.

Kwong Wai Shiu Hospital (Amendment) Ordinance, 1958 (No. 28 of 1958)

84. This Ordinance enables the permitted maximum number of committee members to be increased from 40 to 60. This has been considered necessary as a result of the rapid expansion of the hospital which is run on a charitable basis and maintained solely by members of the Cantonese community through voluntary subscriptions and donations. It has been felt that the number of members provided for in the Principal Ordinance in 1910 is inadequate for the working administration and affairs of the hospital at the present time.

The Factories Ordinance, 1958 (No. 41 of 1958)

85. This legislation was introduced by the Minister for Labour and Welfare, but there has been consultation with this Ministry especially in regard to the provisions for the health and conditions of work in the factories.

86. Part IV of this Ordinance lays down in considerable details general provisions regarding the clean and sanitary state of factories and workshops, has provisions for ventilation, lighting and drainage and for sanitary conveniences. Special provisions and powers for making regulations are also provided for the removal of dust or fumes, for protection of clothing and appliances, for the protection of eyes in certain processes, and for notification

of certain industrial diseases. Provision is also made for medical supervision if this is deemed necessary in certain classes of factories or for certain categories of workers.

Nursing Homes and Maternity Homes Bill

87. This Bill (approved since by the Assembly as No. 5 of 1959) provides for the registration control and supervision of premises used for the reception of sick or convalescent persons and of premises used for the reception of pregnant women or of women immediately after childbirth. Maternity homes or nursing homes maintained by Government or a local authority or places licensed under local authority by laws for the reception of sick or dying are exempt from the provisions of this Ordinance.

88. The power to register such homes is vested in the local authority with consequential powers of entry and inspection. Provision is made for the Minister to make regulations regarding the nature of records to be kept, the notification of births and deaths in the Home and the standards of siting, construction, accommodation, sanitation, water-supply, lighting, staffing and equipment.

Midwives (Amendment) Bill

89. This Bill was finalised during the year and has since then been tabled in the Legislative Assembly. It was approved by the Assembly in February 1959.

90. Some of the provisions are consequential to changes in respect of the administration of Christmas Island and the Cocos and Keeling Islands. Other provisions are consequential to the re-organization of the local government in Singapore. Persons who are entitled to be registered under the Ordinance is defined more accurately. The Midwives Board is given more extension power to make rules to enable it to carry out its duties and exercise its power under the Ordinance. Provision is also made for the compilation and publication of a Register of Midwives.

SUBSIDIARY LEGISLATION

Methyl Bromide Fumigation Regulations

91. During the course of the year the Methyl Bromide Fumigation Regulations and together with the Hydrogen Cyanide Application Order were brought into force to enable fumigation with Methyl Bromide to be controlled under the provisions of the Hydrogen Cyanide Fumigation Ordinance. The object of this is to restrict such operations to licensed operators who will work under special licences granted by the Director of Medical Services and who will be required to take such precautions as are necessary in the use of this toxic gas.

Food and Drug Regulations

92. The Food and Drugs Sub-committee of the Medical Advisory Council studied the operation of the revised Food and Drugs Regulations which were published in 1957 and have finalised recommendations to the Medical Advisory Council for a number of amendments—some of them involving major changes of policy regarding the control of certain food for submission to the Minister for his consideration. These recommendations have since been approved by the Medical Advisory Council and submitted to the Minister.

Chapter Two

STAFF WELFARE

93. During the course of 1958 the major problem which received the attention of both Government and the Staff Side was the re-organisation by the Medical Services, in particular, the re-organisation of Division II and Division III. The re-organisation of Division IV was tied up with the re-organisation of other departments and had already been completed. This re-organisation involved the preparation of schemes of service and the unifying of a multiplicity of salary scales on to four basic salary scales which had been accepted for the General Civil Service re-organisation. This work had reached its final stages by the end of 1958 and is expected to be approved by Government early in 1959.

94. The Personnel and Welfare Section of the Government Health Department continued to provide a Welfare Service for daily rated labour force. The distribution of the labour force to the three future District Councils with the retention of a small nucleus for the work of the Central Health Office was done satisfactorily taking into account the personal problems involved in such transfers. A healthy relation between the official side and the labour force has been maintained. The financial position of the Government Health Department Labourers' Co-operative Credit Society Ltd. is given in Table 3.

Table 3

FINANCIAL SUMMARY OF GOVERNMENT HEALTH DEPARTMENT LABOURERS' CO-OPERATIVE CREDIT SOCIETY LTD.

	Year ended 31st December, 1957	*Year ended 31st December, 1958*
Post Office Savings Bank ...	10,026 79	9,185 06
Chartered Bank	1,435 65	3,492 84
Cash in transit	1,865 90	2,111 65
Investments	50,256 25	50,256 25
Loans outstanding	8,051 25	8,373 00
Total Credit balance ...	71,635 84	73,418 80
Membership	209	200
Total staff eligible	1,132	1,224

95. The Annual Sports of the Singapore Medical Services was held in October. General Hospital won the Challenge Shield.

96. Concerts, social activities and children's parties were held in various institutions during the year.

Chapter Three

VITAL STATISTICS

97. The population for the mid-year 1958 is based on the actual 1957 census figure plus migration surplus cases both over death census then on this calculation is estimated as 1,514,900. The details of the population by race since the census of 1911 are given in Table 4.

Table 4

POPULATION OF SINGAPORE, 1911–58

Year	Chinese	Malay-sians	Indians and Pakis-tanis	Euro-peans	Eura-sians	Others	Total
1911 (Census) ..	219,577	41,806	27,755	5,711	4,671	3,801	303,321
1921 (Census) ..	315,151	53,595	32,314	6,145	5,346	5,717	418,358
1931 (Census) ..	418,640	65,014	50,811	8,082	6,903	8,295	557,745
1947 (Census) ..	729,473	113,803	68,967	9,279	9,110	7,512	938,144
1957 (Census) ..	1,090,595	197,060	124,084	10,826	11,382	11,982	1,445,929
1958 (Mid-Year) ..	1,141,800	207,300	129,500	12,100	11,100	12,500	1,514,900

Table 5

MID-YEAR POPULATION ESTIMATES OF SINGAPORE BY RACIAL GROUP AND SEX, 1958

Racial Group	Male	Female	Total
Chinese	580,600	561,200	1,141,800
Malaysians	108,300	99,000	207,300
Indians and Pakistanis ..	88,800	40,700	129,500
Europeans	6,300	5,800	12,100
Eurasians	5,800	5,900	11,700
Others	6,600	5,900	12,500
Total ..	796,400	718,500	1,514,900

98. The ratio of females to males in 1931 was 584 to 1,000. At the 1947 census it was 819 to 1,000. The ratio of females to males in the 1957 census was 940 to 1,000; in 1958 this ratio was 902 to 1,000.

99. The annual increases in the number of births continues to increase. The 1958 figure of 63,572 constitutes an all time record; this compares with 62,685 in 1957.

100. The crude birth rate was 41.9. The trend in the birth rate now appears to be stabilising around 42 for the last two or three years.

TABLE 6

LIVE-BIRTHS WHICH OCCURRED IN 1958

BY RACIAL GROUP AND AGE OF MOTHER AND BY SEX OF CHILD

Mothers Age in Years	TOTAL			CHINESE		MALAYSIANS		INDIANS AND PAKISTANIS		EURO-PEANS		EURA-SIANS		OTHERS	
	M. & F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
12	3	2	1	..	..	2	1	..	..	..	..	..	..	..	..
13	4	1	3	..	1	..	1	1	1	..	..	..	..	..	..
14	32	16	16	1	4	7	8	8	4	..	..	..	..	..	..
15	102	49	53	12	12	25	25	11	16	..	..	..	..	1	..
16	356	188	168	57	45	86	73	39	44	..	..	..	..	6	6
17	848	437	411	175	170	167	169	82	63	1	1	3	1	9	7
18	1,738	907	831	455	442	320	241	117	125	5	4	2	4	8	15
19	2,121*	1,115	1,005	627	569	341	298	121	111	12	8	7	4	7	15
20	3,003	1,567	1,436	932	843	393	390	182	165	22	20	11	11	27	7
21	2,767	1,370	1,397	856	869	286	308	162	149	35	38	13	11	18	22
22	4,008	2,090	1,918	1,420	1,305	407	392	181	151	50	44	12	14	20	12
23	4,032	2,059	1,973	1,465	1,419	362	351	160	141	46	35	10	8	16	19
24	3,992	2,040	1,952	1,513	1,422	314	287	137	158	52	55	9	11	15	19
25	3,980	2,120	1,860	1,478	1,340	383	316	180	136	41	46	15	9	23	13
26	3,773	1,984	1,789	1,508	1,342	258	251	136	120	48	40	16	16	18	20
27	3,578	1,810	1,768	1,381	1,339	243	235	110	128	50	36	9	14	17	16
28	4,032	2,029	2,003	1,495	1,477	335	315	129	148	38	36	13	10	19	17
29	3,145	1,623	1,522	1,293	1,211	196	172	77	89	33	30	7	6	17	14
30	3,545	1,832	1,713	1,341	1,264	303	288	127	105	35	35	6	11	20	10
31	2,430	1,279	1,151	1,042	957	116	103	63	58	34	20	12	8	12	5
32	2,363	1,195	1,168	936	914	152	144	67	68	27	26	7	6	6	10
33	1,854	958	896	760	713	107	95	53	54	19	21	11	4	8	9
34	1,861	950	911	801	735	90	97	37	39	15	18	2	12	5	10
35	1,872	977	895	746	655	144	175	60	41	20	13	4	7	3	4
36	1,481	753	728	651	600	66	69	25	40	6	11	2	6	3	2
37	1,344	705	639	609	550	46	48	31	32	9	5	4	3	6	1
38	1,295	656	639	557	531	64	69	20	21	8	14	4	2	3	2
39	946	478	468	411	407	42	33	16	13	2	7	3	5	4	3
40	965	507	458	436	385	46	50	12	19	8	2	2	2	3	..
41	582	273	309	242	282	13	12	8	12	6	1	1	1	3	1
42	527†	275	251	256	236	6	11	5	3	8	..	..	..	..	1
43	362	186	176	181	167	4	6	1	..	..	2	..	1	..	..
44	245	133	112	121	107	6	3	3	1	3	1	..	..	..	..
45	205	105	100	92	85	12	12	..	3	1	..	..	..	..	..
Over 45	174	86	88	75	86	10	2	1	..	..	..	..	..	..	..
Un-known	7	4	3	2	2	..	..	..	..	..	..	..	..	2	1
Total ..	63,572‡	32,759	30,811	23,927	22,486	5,352	5,050	2,362	2,258	634	569	185	187	299	261

* Includes 1 of unknown sex (Indians and Pakistanis).

† Includes 1 of unknown sex (Chinese).

‡ Includes 2 of unknown sex.

TABLE 7

LIVE-BIRTHS WHICH OCCURRED IN 1958

REGISTRATION AREA, RACIAL GROUP OF FATHER AND SEX OF CHILD

Racial Group	CITY AREA			RURAL AREA			SINGAPORE TOTAL		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Chinese	18,535	17,312	35,848*	5,286	5,055	10,341	23,821	22,367	46,189*
Malaysians	2,769	2,636	5,405	2,390	2,210	4,600	5,159	4,846	10,005
Indians and Pakistanis	2,121	2,041	4,163*	486	467	953	2,607	2,508	5,116*
Europeans	458	413	871	206	195	401	664	608	1,272
Eurasians	138	164	302	35	25	60	173	189	362
Others	288	246	534	47	47	94	335	293	628
Total ..	24,309	22,812	47,123†	8,450	7,999	16,449	32,759	30,811	63,572†

* Includes 1 of unknown sex. † Includes 2 of unknown sex.

TABLE 8

LIVE-BIRTHS WHICH OCCURRED IN 1958

BY PLACE OF USUAL RESIDENCE OF PARENTS, RACIAL GROUP OF FATHER AND SEX OF CHILD

Place of Usual Residence	Chinese		Malaysians		Indians and Pakistanis		Europeans		Eurasians		Others		TOTAL		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
City	14,880	13,957	2,557	2,420	1,610	1,468	245	230	73	96	220	204	19,585	18,375	37,960
Katong	2,564	2,516	1,505	1,375	309	331	119	107	66	42	54	52	4,617	4,423	9,041*
Serangoon	4,004	3,804	442	393	483	478	237	208	26	41	35	23	5,227	4,947	10,174
Bukit Panjang	1,236	1,086	197	215	156	173	16	17	4	7	5	2	1,614	1,500	3,115†
Jurong	1,040	900	167	166	30	37	4	5	2	1	2	2	1,245	1,111	2,356
Southern Islands	64	67	272	260	6	13	3	4	1	1	2	..	348	345	693
Singapore Unspecified ..	15	23	6	2	6	4	4	1	..	1	1	1	32	32	64
Federation	16	12	13	13	7	3	35	34	1	..	16	9	88	71	159
Overseas	2	2	..	2	..	1	1	2	..	..	..	..	3	7	10
Total ..	23,821	22,367	5,159	4,846	2,607	2,508	664	608	173	189	335	293	32,759	30,811	63,572‡

* Includes 1 of unknown sex (Indians and Pakistanis). † Includes 1 of unknown sex (Chinese). ‡ Includes 2 of unknown sex.

TABLE 9

LIVE-BIRTHS WHICH OCCURRED IN 1958

BY PLACE OF USUAL RESIDENCE OF PARENTS, REGISTRATION AREA AND SEX OF CHILD

Place of Usual Residence	REGISTRATION AREA						TOTAL		
	CITY AREA			RURAL AREA					
	Male	Female	Total	Male	Female	Total	Male	Female	Total
City	19,427	18,223	37,650	158	152	310	19,585	18,375	37,960
Katong	1,518	1,510	3,029*	3,099	2,913	6,012	4,617	4,423	9,041*
Serangoon	2,223	2,074	4,297	3,004	2,873	5,877	5,227	4,947	10,174
Bukit Panjang	598	539	1,138*	1,016	961	1,977	1,614	1,500	3,115*
Jurong	392	325	717	853	786	1,639	1,245	1,111	2,356
Southern Islands	46	48	94	302	297	599	348	345	693
Singapore Unspecified	23	30	53	9	2	11	32	32	64
Federation	79	57	136	9	14	23	88	71	159
Overseas	3	6	9	..	1	1	3	7	10
Total ..	24,309	22,812	47,123†	8,450	7,999	16,449	32,759	30,811	63,572†

* Includes 1 of unknown sex. † Includes 2 of unknown sex.

SINGAPORE

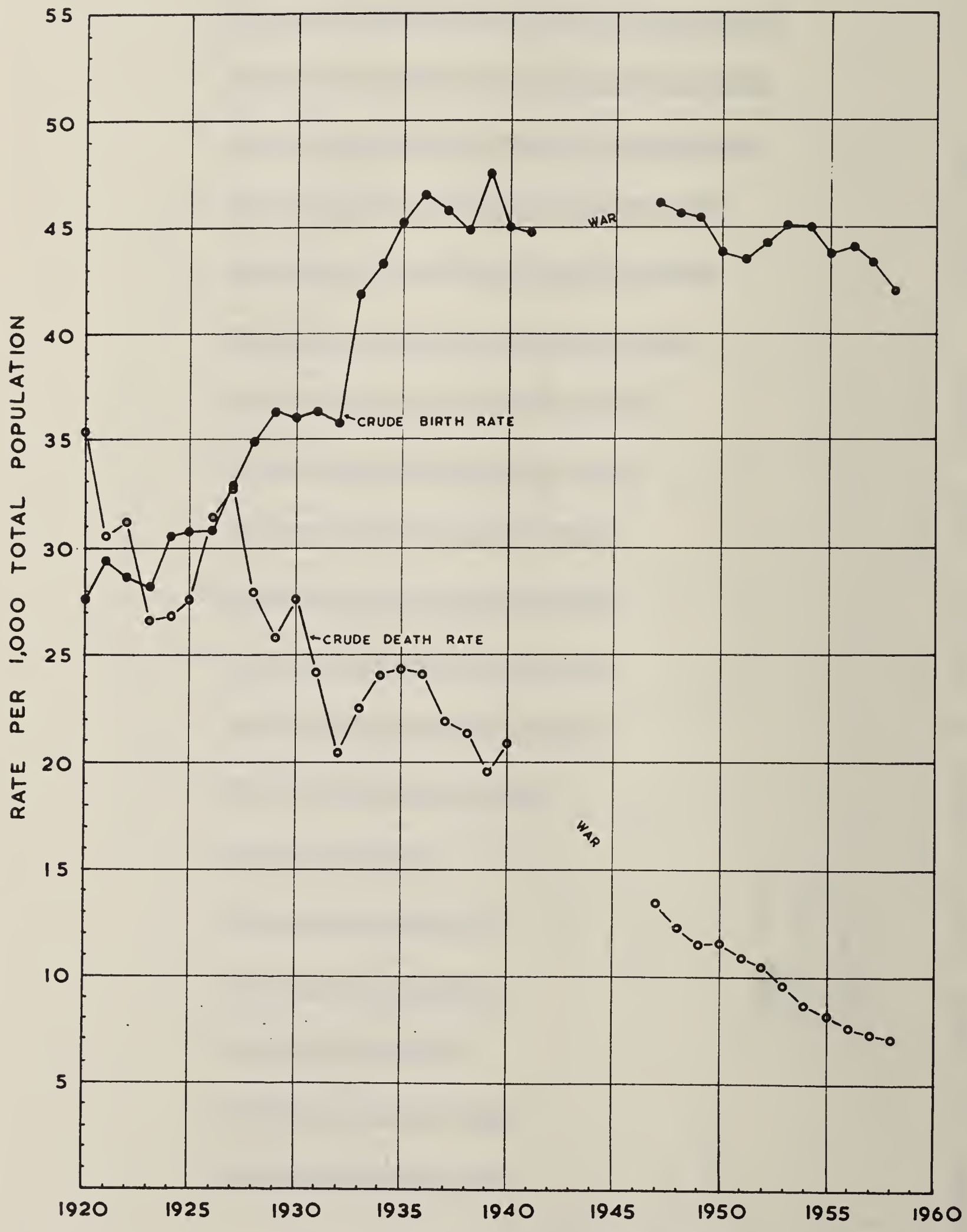
DIAGRAM TO SHOW TOTAL BIRTHS & DEATHS FOR PERIOD 1940 - 1958



DEPT. OF SOCIAL MEDICINE & PUBLIC HEALTH

SINGAPORE

TREND OF CRUDE BIRTH AND DEATH RATES: 1920 ONWARDS



DEPT. OF SOCIAL MEDICINE & PUBLIC HEALTH

TABLE 10

DEATHS REGISTERED IN 1958

BY REGISTRATION AREA, SEX AND RACIAL GROUP

Racial Group	CITY AREA			RURAL AREA			SINGAPORE TOTAL		
	M.	F.	Total	M.	F.	Total	M.	F.	Total
Chinese	3,722	2,532	6,255*	741	617	1,358	4,463	3,149	7,613*
Malaysians	622	485	1,107	454	370	824	1,076	855	1,931
Indians and Pakistanis	470	195	665	87	40	127	557	235	792
Europeans	79	20	99	13	2	15	92	22	114
Eurasians	35	28	63	9	15	24	44	43	87
Others	55	22	83†	11	8	19	66	30	102†
Total ..	4,983	3,282	8,272‡	1,315	1,052	2,367	6,298	4,334	10,639‡

* Includes 1 unknown sex.

† Includes 6 unknown sex.

‡ Includes 7 unknown sex.

TABLE 11

DEATHS REGISTERED IN 1958

BY PLACE OF USUAL RESIDENCE, SEX AND RACIAL GROUP

Place of Usual Residence	Chinese		Malaysians		Indians and Pakistanis		Europeans		Eurasians		Others		TOTAL		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
City	3,011	2,094	518	421	357	160	46	15	21	19	39	15	3,992	2,724	6,717*
Katong	394	336	313	275	79	28	15	..	14	14	10	9	825	662	1,487
Serangoon	628	457	102	54	79	35	11	5	7	10	4	3	831	564	1,395
Bukit Panjang	169	125	40	34	19	11	3	..	1	..	..	..	232	170	402
Jurong	135	95	48	33	7	1	..	..	..	..	..	..	190	129	319
Southern Islands	13	4	41	26	2	..	..	..	..	..	..	..	56	30	86
Singapore Unspecified ..	67	16	2	3	10	..	4	..	..	..	5	..	88	19	113†
Federation	42	21	11	9	4	..	3	2	1	..	8	2	69	34	103
Overseas	4	1	1	..	..	..	10	..	..	..	..	1	15	2	17
Total ..	4,463	3,149	1,076	855	557	235	92	22	44	43	66	30	6,298	4,334	10,639‡

* Includes 1 unknown sex (Chinese). † Includes 6 unknown sex (Others). ‡ Includes 7 unknown sex.

TABLE 12

DEATHS REGISTERED IN 1958

BY PLACE OF USUAL RESIDENCE, REGISTRATION AREA AND SEX

Place of Usual Residence	REGISTRATION AREA						TOTAL		
	CITY AREA			RURAL AREA					
	Male	Female	Total	Male	Female	Total	Male	Female	Total
City	3,936	2,692	6,629*	56	32	88	3,992	2,724	6,717*
Katong	324	196	520	501	466	967	825	662	1,487
Serangoon	366	233	599	465	331	796	831	564	1,395
Bukit Panjang	109	67	176	123	103	226	232	170	402
Jurong	76	38	114	114	91	205	190	129	319
Southern Islands	15	8	23	41	22	63	56	30	86
Singapore Unspecified	84	18	108†	4	1	5	88	19	113†
Federation	59	28	87	10	6	16	69	34	103
Overseas	14	2	16	1	..	1	15	2	17
Total ..	4,983	3,282	8,272‡	1,315	1,052	2,367	6,298	4,334	10,639‡

* Includes 1 of unknown sex. † Includes 6 of unknown sex. ‡ Includes 7 of unknown sex.

TABLE 13

DEATHS REGISTERED IN 1958

BY AGE GROUP, RACIAL GROUP AND SEX

Age Group	Total			Chinese		Malay-sians		Indians and Pakis-tanis		Euro-peans		Eura-sians		Others	
	M. & F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 day ..	295	171	124	117	71	33	34	9	10	8	4	2	4	2	1
1 day and under 2 days	203	127	76	87	48	27	15	8	11	2	..	1	2	2	..
2 days and under 3 days	134	82	52	56	38	19	12	5	2	..	..	..	..	2	..
3 days and under 4 days	101†	63	37	41	21	14	10	5	4	2	1	..	..	1	1
4 days and under 5 days	67	39	28	21	15	15	11	3	2	..	..	..	..	..	..
5 days and under 6 days	44	26	18	16	13	8	2	1	2	1	..	..	1	..	..
6 days and under 7 days	50	25	25	17	17	6	6	2	1	..	1	..	..	..	..
7 days and under 14 days	152	99	53	67	35	23	12	7	4	..	1	..	..	2	1
14 days and under 21 days	82	56	26	41	15	9	8	5	2	1	1	..	..	..	..
21 days and under 28 days	80	46	34	28	19	14	12	4	3	..	..	..	..	..	..
Neo-Natal Deaths ..	1,208†	734	473	491	292	168	122	49	41	14	8	3	7	9	3
28 days and under 2 months	286	170	116	86	65	66	36	17	13	..	2	..	..	1	..
2 months and under 3 months	231	132	99	62	57	58	37	10	5	..	..	..	..	2	..
3 months and under 4 months	169	94	75	45	40	41	26	6	7	..	1	1	1	1	..
4 months and under 5 months	151	80	71	42	44	31	18	4	8	1	..	..	1	2	..
5 months and under 6 months	115	60	55	36	31	20	18	4	5	..	..	..	..	..	1
6 months and under 7 months	149	85	64	40	45	33	17	8	2	..	..	1	..	3	..
7 months and under 8 months	113	48	65	24	31	18	27	5	5	..	1	..	..	1	1
8 months and under 9 months	97	54	43	36	22	14	16	4	3	..	1	..	..	..	1
9 months and under 10 months	91	44	47	32	26	9	17	3	3	..	..	..	1	..	..
10 months and under 11 months	77	35	42	21	29	13	11	1	1	..	..	..	1	..	..
11 months and under 1 year	74	36	38	18	14	17	22	1	1	..	..	..	..	..	1
Infant Mortality* ..	2,761†	1,572	1,188	933	696	488	367	112	94	15	13	5	11	19	7
Under 1 year ..	2,761†	1,572	1,188	933	696	488	367	112	94	15	13	5	11	19	7
1 year and under 2 years	469	255	214	155	143	82	50	15	17	1	2	2	1	..	1
2 years and under 3 years	259	137	122	84	93	43	21	10	8	..	..	..	..	..	..
3 years and under 4 years	150	77	73	58	51	12	20	4	1	1	..	1	1	1	..
4 years and under 5 years	121	78	43	61	31	14	11	2	1	1	..	..	..	..	..
5— 9 years ..	248	128	120	100	83	19	26	6	8	1	..	1	1	1	2
10—14 years ..	133	83	50	64	32	12	11	6	6	..	..	1	..	..	1
15—19 years ..	140	77	63	60	39	11	17	1	5	3	..	1	2	1	..
20—24 years ..	151	88	63	59	28	13	25	6	9	8	..	..	..	2	1
25—29 years ..	189	108	81	65	48	18	25	10	5	9	..	1	..	5	3
30—34 years ..	201	121	80	70	57	20	16	17	4	6	2	3	1	5	..
35—39 years ..	271	170	101	107	69	13	20	39	9	6	1	2	1	3	1
40—44 years ..	409	257	152	165	114	35	29	44	5	8	1	2	1	3	2
45—49 years ..	539	374	165	275	130	34	23	55	8	2	1	6	1	2	2
50—54 years ..	689	493	196	379	147	35	36	67	10	6	..	3	3	3	..
55—59 years ..	771	540	231	403	185	54	31	69	12	9	..	1	1	4	2
60—64 years ..	817	547	270	448	219	54	38	33	10	5	1	2	2	5	..
65—69 years ..	776	471	305	384	266	42	19	28	14	7	1	5	3	5	2
70—74 years ..	668	361	307	304	279	33	20	13	4	2	..	5	3	4	1
75—79 years ..	418	198	220	170	197	14	16	10	4	1	..	1	3	2	..
80—84 years ..	262	102	160	79	140	17	15	3	..	1	..	2	4	..	1
85 years and over ..	184	55	129	38	102	13	18	4	1	..	..	..	4	..	4
Unknown	13‡	6	1	2	..	..	1	3	..	..	..	..	..	1	..
Total ..	10,639§	6,298	4,334	4,463	3,149	1,076	855	557	235	92	22	44	43	66	30

* Includes neo-natal deaths. † Includes 1 of unknown sex (Chinese). ‡ Includes 6 of unknown sex (Others).

§ Includes 7 of unknown sex.

TABLE 14

DEATHS REGISTERED IN 1958

BY REGISTRATION AREA, AGE GROUP AND SEX

Age Group	Singapore Total			City Area			Rural Area		
	M.&F.	M.	F.	M.&F.	M.	F.	M.&F.	M.	F.
Under 1 day	295	171	124	258	149	109	37	22	15
1 day and under 2 days ..	203	127	76	179	112	67	24	15	9
2 days and under 3 days ..	134	82	52	125	76	49	9	6	3
3 days and under 4 days ..	101†	63	37	89†	60	28	12	3	9
4 days and under 5 days ..	67	39	28	56	31	25	11	8	3
5 days and under 6 days ..	44	26	18	40	23	17	4	3	1
6 days and under 7 days ..	50	25	25	43	22	21	7	3	4
7 days and under 14 days ..	152	99	53	135	93	42	17	6	11
14 days and under 21 days ..	82	56	26	66	48	18	16	8	8
21 days and under 28 days ..	80	46	34	64	40	24	16	6	10
Neo-Natal Deaths ..	1,208†	734	473	1,055†	654	400	153	80	73
28 days and under 2 months ..	286	170	116	196	109	87	90	61	29
2 months and under 3 months ..	231	132	99	155	85	70	76	47	29
3 months and under 4 months ..	169	94	75	111	60	51	58	34	24
4 months and under 5 months ..	151	80	71	116	56	60	35	24	11
5 months and under 6 months ..	115	60	55	90	47	43	25	13	12
6 months and under 7 months ..	149	85	64	105	57	48	44	28	16
7 months and under 8 months ..	113	48	65	80	35	45	33	13	20
8 months and under 9 months ..	97	54	43	75	45	30	22	9	13
9 months and under 10 months ..	91	44	47	70	37	33	21	7	14
10 months and under 11 months ..	77	35	42	57	23	34	20	12	8
11 months and under 1 year ..	74	36	38	49	22	27	25	14	11
Infant Mortality* ..	2,761†	1,572	1,188	2,159†	1,230	928	602	342	260
Under 1 year	2,761†	1,572	1,188	2,159†	1,230	928	602	342	260
1 year and under 2 years ..	469	255	214	347	189	158	122	66	56
2 years and under 3 years ..	259	137	122	190	100	90	69	37	32
3 years and under 4 years ..	150	77	73	122	61	61	28	16	12
4 years and under 5 years ..	121	78	43	88	59	29	33	19	14
5— 9 years	248	128	120	211	109	102	37	19	18
10—14 years	133	83	50	114	74	40	19	9	10
15—19 years	140	77	63	121	72	49	19	5	14
20—24 years	151	88	63	131	80	51	20	8	12
25—29 years	189	108	81	170	98	72	19	10	9
30—34 years	201	121	80	176	108	68	25	13	12
35—39 years	271	170	101	232	148	84	39	22	17
40—44 years	409	257	152	342	217	125	67	40	27
45—49 years	539	374	165	466	333	133	73	41	32
50—54 years	689	493	196	587	430	157	102	63	39
55—59 years	771	540	231	604	427	177	167	113	54
60—64 years	817	547	270	623	423	200	194	124	70
65—69 years	776	471	305	577	353	224	199	118	81
70—74 years	668	361	307	452	240	212	216	121	95
75—79 years	418	198	220	270	130	140	148	68	80
80—84 years	262	102	160	158	62	96	104	40	64
85 years and over	184	55	129	120	35	85	64	20	44
Unknown	13‡	6	1	12‡	5	1	1	1	..
Total ..	10,639§	6,298	4,334	8,272§	4,983	3,282	2,367	1,315	1,052

* Includes neo-natal deaths.

† Includes 1 of unknown sex.

‡ Includes 6 of unknown sex.

§ Includes 7 of unknown sex.

TABLE 15

BIRTHS AND BIRTH RATES

Racial Group	1931		1947		1957		1958	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Chinese	15,993	37.85	33,629	46.20	46,263	42.4	46,189	40.45
Malaysians ..	2,862	43.69	5,473	47.73	9,317	47.3	10,005	48.26
Indians and Pakistanis	1,020	19.64	3,087	43.30	5,020	40.4	5,116	39.52
Europeans ..	169	20.55	312	35.79	1,140	31.0	1,272	33.38
Eurasians ..	199	28.53	359	39.84	360	31.4	362	30.85
Others	227	29.09	185	28.27	585	44.5	628	46.12
Unknown ..	..	..	..	..	..	..	..	..
Total ..	20,470	36.37	43,045	45.89	62,685	42.5	63,572	41.96
Males	10,753	..	22,152	..	32,280	..	32,759	..
Females	9,717	..	20,893	..	30,400	..	30,811	..
	20,470	..	43,045	..	62,685	..	63,572*	..
Male births per 100 births	..	52.04	..	51.23	..	51.50	..	..

* Includes 2 unknown sex.

TABLE 16

DEATHS AND DEATH RATES

Racial Group	1931		1947		1957		1958	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Chinese	10,599	25.09	9,368	12.87	7,696	7.1	7,613	6.67
Malaysians ..	1,905	29.08	2,029	17.70	1,967	10.0	1,931	9.32
Indians and Pakistanis	820	15.81	878	12.32	791	6.4	792	6.12
Europeans ..	51	6.20	74	8.49	95	2.6	114	2.99
Eurasians ..	103	14.76	84	9.32	75	6.5	87	7.41
Others	145	18.58	78	11.92	86	6.5	102	7.49
Total ..	13,623	24.20	12,511	13.34	10,710	7.3	10,639	7.02

101. The death rate in 1958 is the lowest on record at 7.0 per thousand of the population and compares very favourably with any country as crude death rate.

TABLE 17

INFANT DEATHS AND INFANT MORTALITY RATE, 1958

Racial Group	*Number*	*Rate*
Chinese	1,630	35.29
Malaysians	855	85.46
Indians and Pakistanis	206	40.27
Europeans	28	22.01
Eurasians	16	44.20
Others	26	41.40
Total ...	2,761	43.43

102. The infant mortality rate now stands at 43.43 this compares with the figure of 191.3 in 1931, 103.47 in 1939, 284.95 in 1944, 87.33 in 1947, 69.97 in 1952, 49.67 in 1955 and 41.11 in 1957. As in previous years of the three main races the Chinese rate is still the lowest at 35.29 compared with 32.81 in 1957, the Indians are intermediate being 40.27 compared with 39.64 in 1957 and the Malaysians the highest at 85.46 compared with 86.40 in 1957.

103. It appears that the progressive drop in infant mortality rates which was a feature of the post-war period also appears to be stabilising itself in the region of 35–40 per thousand live births. The fact that the Malay infant mortality rate is more than double that of the other two major racial groups has been commented on in previous years. The still-birth rate in 1958 was 15.16.

104. The number of maternal deaths during the year was 50. The maternal rate was 0.8 per thousand live births.

TABLE 18

STILL BIRTHS AND STILL BIRTH RATE

Year	Still-Births	Still-Birth Rate	Year	Still-Births	Still-Birth Rate
1931	568	27.0	1945	459	18.4
1932	528	24.8	1946	645	16.4
1933	527	23.9	1947	671	15.3
1934	586	25.1	1948	753	16.7
1935	650	24.5	1949	803	17.1
1936	693	24.1	1950	807	17.1
1937	755	24.7	1951	802	16.4
1938	783	24.0	1952	901	17.3
1939	814	23.0	1953	925	16.9
1940	719	20.8	1954	932	16.1
1941	816	23.2	1955	904	15.4
1942	467	16.6	1956	909	14.7
1943	599	18.8	1957	970	15.2
1944	610	18.9	1958	978	15.2

TABLE 19

MATERNAL DEATHS AND MATERNAL MORTALITY RATE

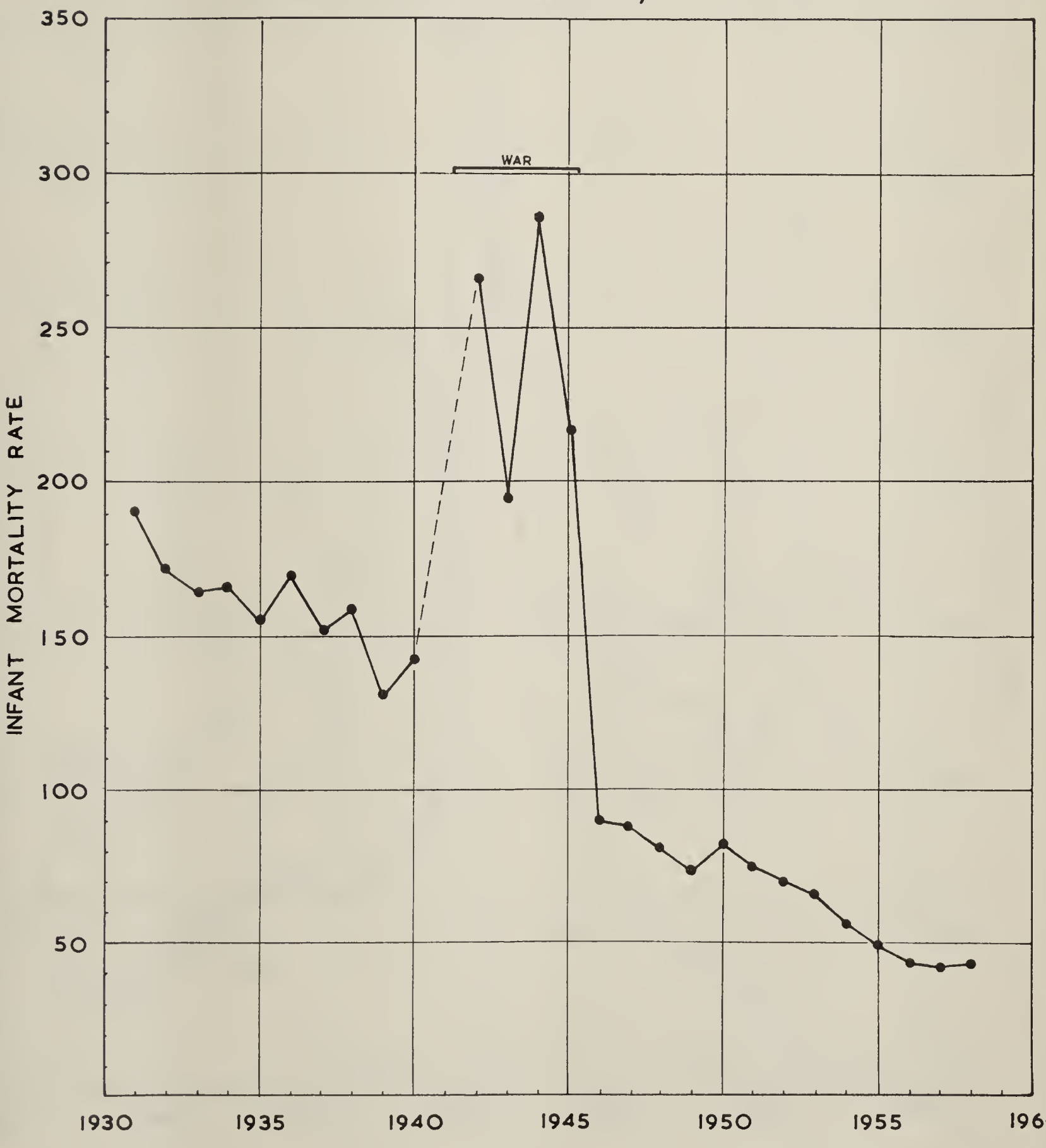
Year	Maternal Deaths	Maternal Mortality Rate	Year	Maternal Deaths	Maternal Mortality Rate
1931	158	7.5	1945	179	7.2
1932	160	7.5	1946	128	3.3
1933	128	5.8	1947	125	2.9
1934	111	4.8	1948	108	2.4
1935	100	3.8	1949	102	2.2
1936	103	3.6	1950	86	1.8
1937	134	4.4	1951	80	1.6
1938	154	4.7	1952	87	1.7
1939	140	4.0	1953	68	1.2
1940	148	4.3	1954	88	1.5
1941	146	4.1	1955	52	0.9
1942	160	5.7	1956	45	0.7
1943	139	4.4	1957	55	0.9
1944	131	4.1	1958	50	0.8

(*Note*:—Maternal deaths are taken as deaths due to deliveries and complications of pregnancy, child-birth and the puerperium.)

SINGAPORE

TREND OF INFANT MORTALITY RATE: 1931 ONWARDS

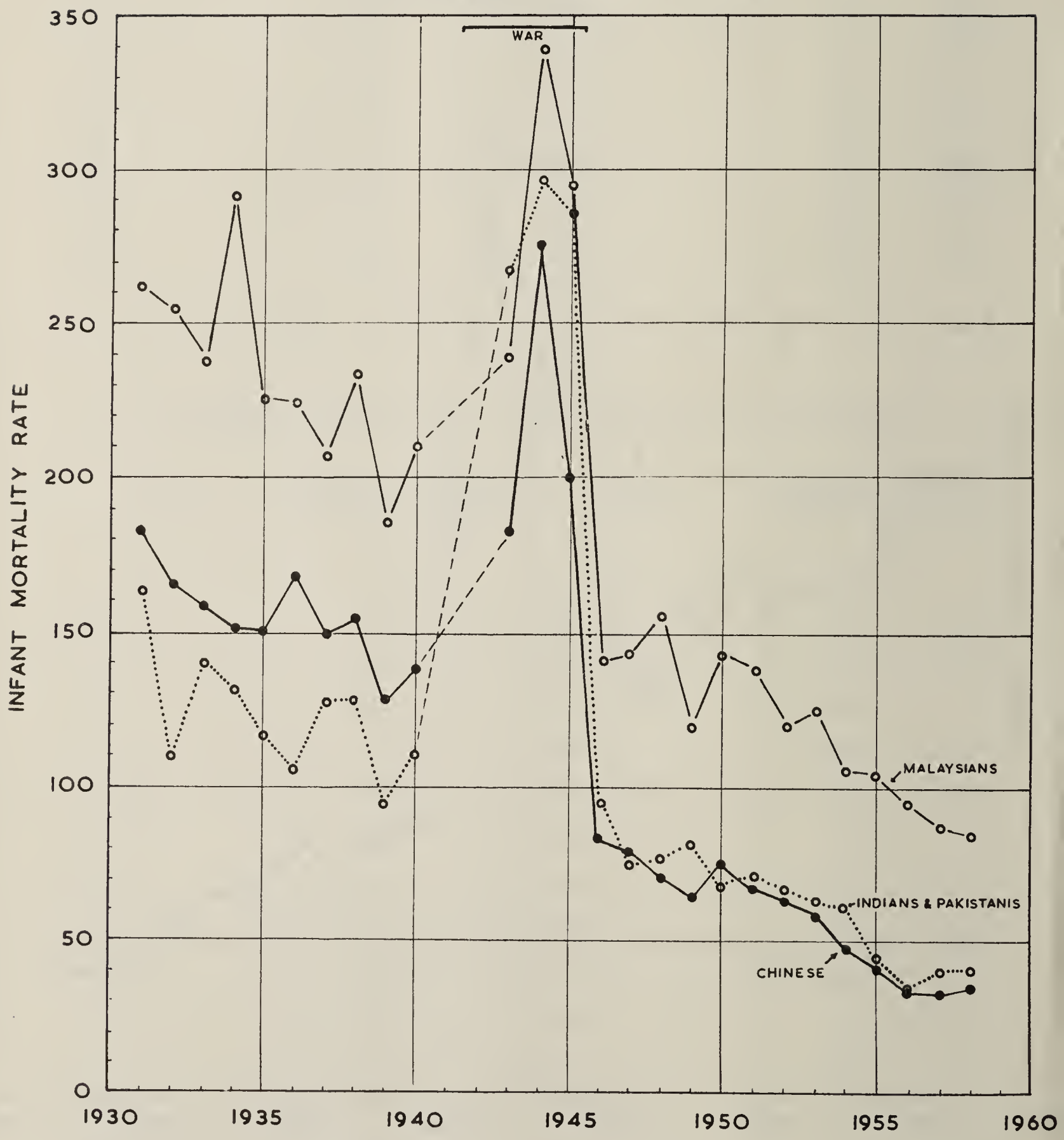
(Rates are the number of deaths reported under one year of age per 1,000 live births).



DEPT. OF SOCIAL MEDICINE & PUBLIC HEALTH

SINGAPORE
INFANT MORTALITY RATES BY ETHNIC GROUP (RACE): 1931 ONWARDS

(Rates are the number of deaths reported under one year of age per 1,000 live births).

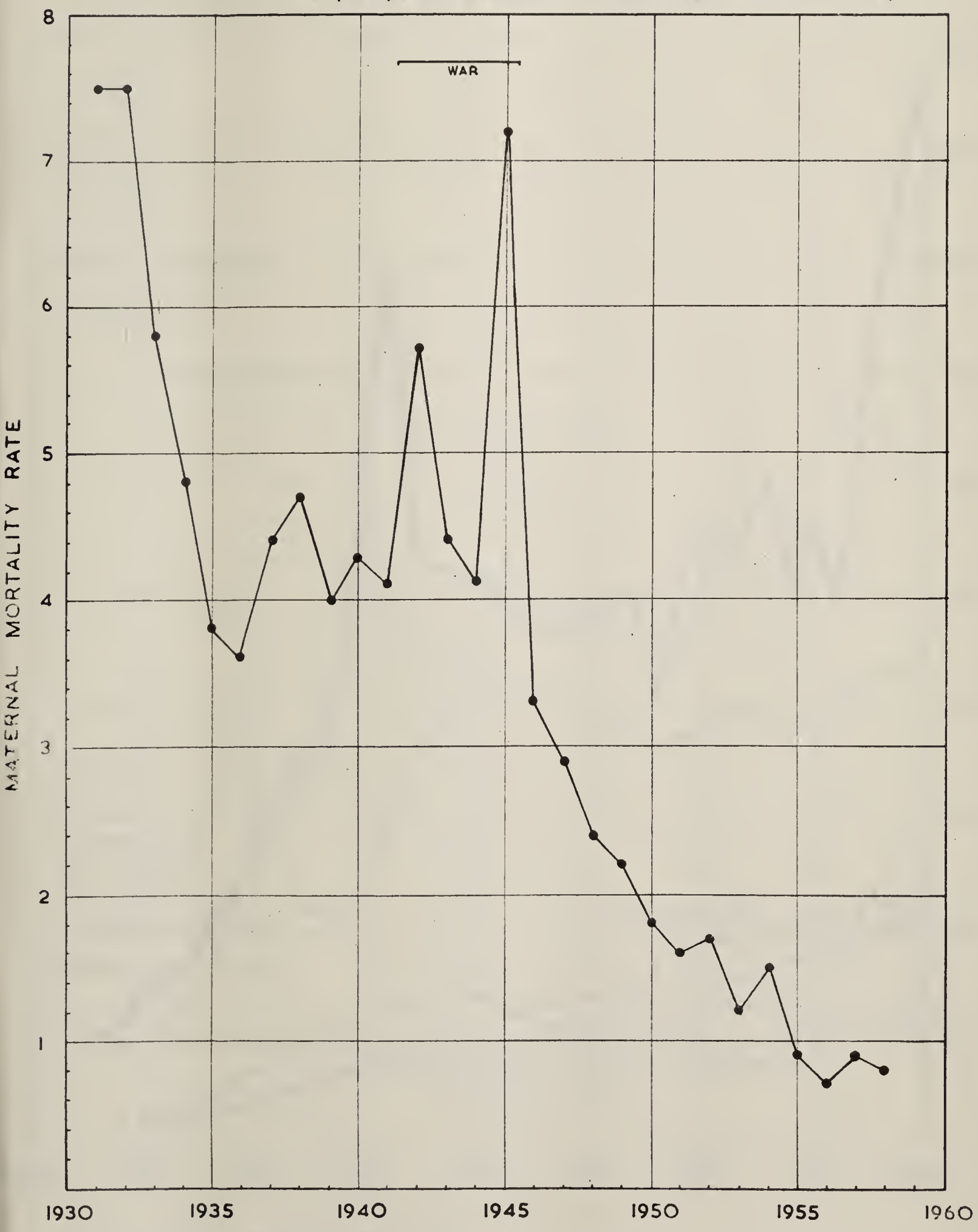


DEPT. OF SOCIAL MEDICINE & PUBLIC HEALTH

SINGAPORE

TREND OF MATERNAL MORTALITY RATE: 1931 ONWARDS

(Rates are the number of deaths due to deliveries and complications of pregnancy, child-birth and the puerperium per 1,000 total live and still births)

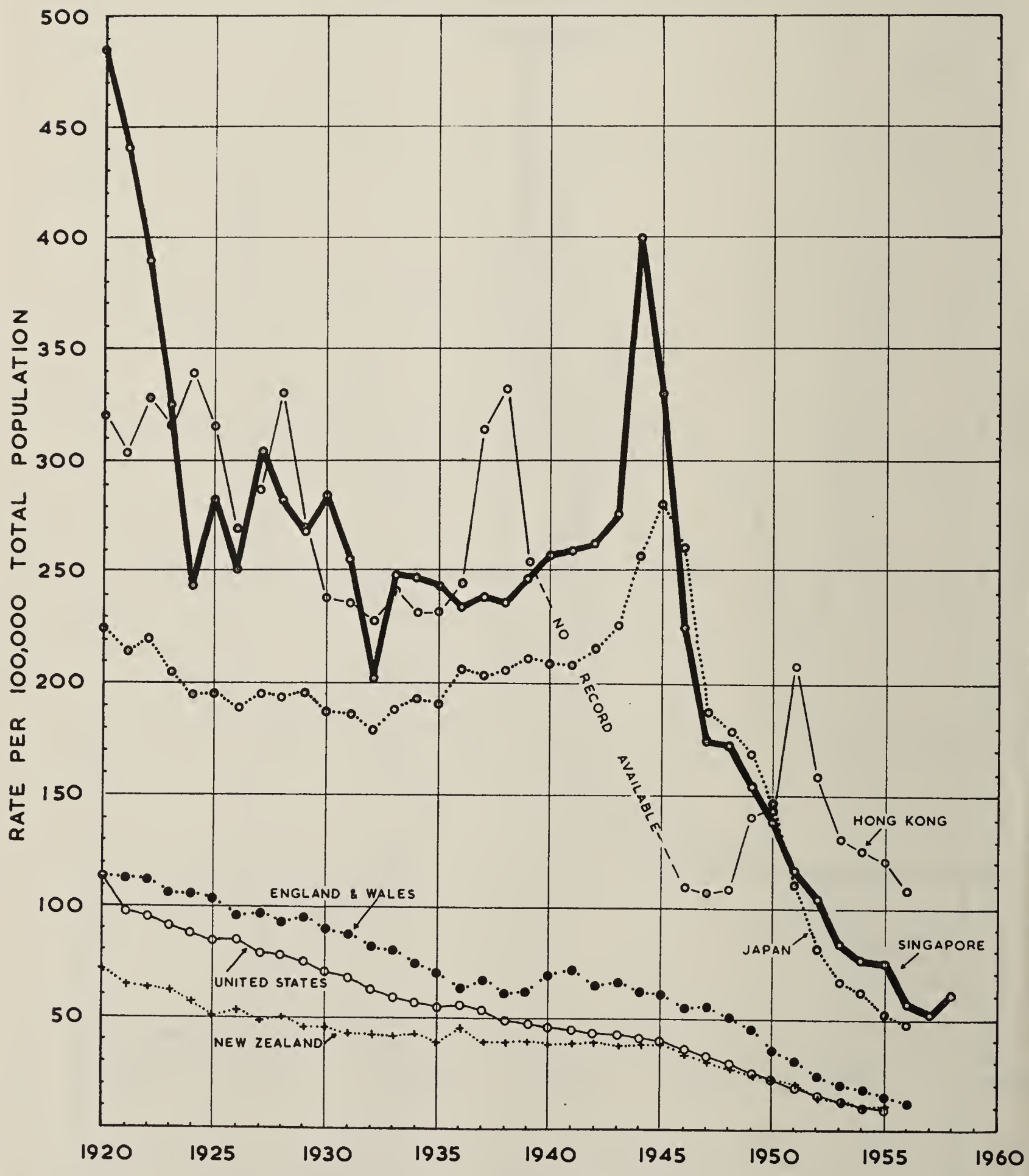


DEPT. OF SOCIAL MEDICINE & PUBLIC HEALTH

TREND OF TUBERCULOSIS DEATH RATES: 1920 ONWARDS

(Singapore and certain other countries)

(Rates are the number of deaths reported from tuberculosis (all forms) per 100,000 total population).



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TABLE 20

MIGRATION STATISTICS BY SEA AND AIR DURING 1958

IMMIGRANTS

Race	ADULTS		CHILDREN*		Total
	Male	Female	Male	Female	
Europeans	34,270	16,498	3,887	3,355	58,010
Eurasians	237	133	46	31	447
Chinese	20,386	10,732	2,311	1,472	34,901
Malaysians	7,812	2,852	596	513	11,773
Indians and Pakistanis ..	12,074	2,718	1,316	921	17,029
Other Races	4,497	962	214	160	5,833
Total, All Races ..	79,276	33,895	8,370	6,452	127,993

* Under 12 years of age.

EMIGRANTS

Race	ADULTS		CHILDREN*		Total
	Male	Female	Male	Female	
Europeans	36,596	18,450	5,127	4,194	64,367
Eurasians	281	142	59	42	524
Chinese	20,810	7,617	1,288	802	30,517
Malaysians	8,888	3,039	594	576	13,097
Indians and Pakistanis ..	21,834	3,885	1,929	1,544	29,192
Other Races	4,705	1,065	262	126	6,158
Total, All Races ..	93,114	34,198	9,259	7,284	143,855

* Under 12 years of age.



OILING AREAS
AND PERMANENT ANTI - MALARIAL DRAINAGE
SINGAPORE ISLAND

SCALE: 3 MILES TO AN INCH

MILE 1 ½ 0 1 2 3 4 5 MILES

City Anti-Malaria Control

Permanent Anti-Malarial Drainage

Main Roads

Rural Anti-Malaria Control

Note:-

Parts of Rural Anti Malaria Control Areas are done by arrangement with other authorities

1. OPIUM PLANT
2. NORMANTON
3. BELMOND & CORNWALL
4. FORD AVENUE
5. OIE TIONG HAM
6. QUEEN ASTRID
7. KING ALBERT PARK
8. ENG NEO AVENUE
9. WOODLANDS I
10. WOODLANDS II
11. JANSON ROAD
12. LOWLAND ROAD
13. SIMON ROAD
14. WOODBRIDGE
15. TRAFALGAR HOME
16. TANAH MERAH
17. SPINKS VALLEY
18. HORSE SHOE VALLEY
19. FISH POND VALLEY
20. Y. VALLEY
21. BEE HOE

Govt. Health Dept.
23.7.57

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PART II

THE HEALTH DIVISION

Chapter Four

INTRODUCTION

105. The Colony of Singapore comprises the main island of Singapore with several small surrounding islands including the Christmas Island. The main island is 27 miles long and 14 miles wide with a land area of 216 square miles. The area of the smaller islands is about 10 square miles.

106. There are two local authorities: the City Council and the Rural Board. The City Council administers a very thickly populated area of 31 square miles and is responsible for all environmental and some personal health services. The rest of the area is under the jurisdiction of the Rural Board, and the Government Health Division under the direction of the Director of Medical Services is responsible for all health services in this area. The School Health and Curative Services are on all-Colony basis.

107. As mentioned in the previous year's report further decentralisation of environmental health services in the area under the Rural Board took place during 1959. These rural areas will, with some changes of boundary form four District Councils under the provisions of the new Local Government Ordinance, 1957. The three Councils on the main island will be the Katong District Council, Serangoon District Council and the Bukit Panjang District Council. The islands to the south of Singapore will constitute the area of the South Islands Council from the middle of 1959. District Health Officers have been posted to the decentralised Rural District Councils. These officers have all had experience in the Rural Health Division and will take charge of the Health Departments of the new Councils.

108. A satisfactory feature of the decentralisation of health services preparatory to the formation of District Councils has been expansion of staff available for the work in the Health Departments of these future District Councils. For the first time in addition to the Public Health Engineer, there are three fully qualified Supervisors of Public Health Works with basic engineering training. The establishment of the qualified Sanitary Inspectorate has increased to 14 officers while there were another eight Probationary Sanitary Inspectors were being trained.

109. It is, however, very essential that the District Councils and their Health Department must have the full benefit of their experience and advice of senior officials of the Ministry of Health. Singapore has a small area and there must be full and effective co-ordination in all matters of environmental health. Consideration is being given to such measures as can be carried out to ensure co-ordination of health policy and programmes.

110. During an island wide epidemic of poliomyelitis which occurred during the period October–December 1958, involving over 400 cases, some 140 were from the rural areas. Of the three rural areas, Serangoon was the most affected area while Bukit Panjang and Katong were less affected although there were a fair number of cases from both these areas as well. The epidemic was a Type I Epidemic and the original cases appeared to have originated from the Serangoon area towards the end of September.

111. The Health Division was responsible for the organisation and administration of a programme of island wide immunisation against poliomyelitis. A major programme of oral vaccination with attenuated live poliomyelitis vaccine was carried out at some 23 centres in all parts of the City and

rural areas. Over 200,000 children were immunised and the results of the vaccination campaign on the course of the epidemic and on problems of immunity are now being assessed.

112. There has been no other epidemic outbreak of infectious disease than the epidemic poliomyelitis referred to earlier. Infectious diseases in the rural areas appeared to have stabilised themselves at the levels of the previous two years despite the annual increase of population. This is particularly noticeable in the case of pulmonary tuberculosis, diphtheria and enteric fever, while leprosy shows a decline, only 21 cases being reported in 1958.

ENVIRONMENTAL HEALTH

113. The main feature of the work during the year was the maintenance of existing health services at its high level and further extension of personal and environmental services as are necessary to meet rapid increase of population in the rural areas.

114. Routine work includes the inspection of places where food is prepared, premises used for offensive trades, house inspections, inspections on reports of nuisance, inspection of premises on behalf of various Government departments and visits in connection with the control of infectious diseases. Samples of food and drugs are taken regularly and prosecutions instituted where necessary. Samples taken under the Food and Drugs Ordinance are analysed by the Department of Chemistry.

115. This population is now over 600,000 and represents more than 40 per cent of the population of the Colony. The increasing housing development in rural areas with its steady flow of urban dwellers making their homes in the many housing developments in hand creates problems of urban sanitation complicated by the fact that these developments are sited in areas which were previously agricultural and with farmers and pig-rearers still working on land adjacent to this. Housing estate development of new resettlement areas and the construction of extensive net work of agricultural roads have further led to the expansion of health services to areas formerly not very accessible and not attended to. The programme of rural sanitation has been continued, in 54 villages have had sanitary improvement effected since the scheme was originally started, 12 of these being during current year.

MALARIA AND MOSQUITO CONTROL

116. No cases of malaria of indigenous origin has been reported in any part of Singapore. A review of the imported cases which were reported in Singapore is given in a later chapter. The programme of Aedes mosquito control around the International Airport has a principal measure of yellow fever control extends over an area of more than 6 square miles. The *A. ægypti* index has been O and the *A. albopictus* index was 1.7 per cent.

MATERNAL AND CHILD HEALTH

117. The Maternal and Child Health Service has had a very successful year. The Kettering Shield was awarded to the service by the National Baby Welfare Council in London for outstanding achievements in the field of Maternal and Child Health since 1954. This shield was won in competition for all British Colonial territories and will be held by the Rural Maternal and Child Health Service for three years until 1960.

118. During the year one new main clinic and one visiting centre were opened. There are now 20 main clinics, 8 midwives centres and 25 visiting centres in the service. The successful programme of immunisation against diphtheria, whooping cough and tetanus was interrupted by the poliomyelitis epidemic, but the work of the previous two or three years is already beginning to show results; this is shown in the stabilization of the number of diphtheria cases and the marked drop of cases of whooping cough. An island wide B.C.G. vaccination programme has been carried out during the year.

SCHOOL HEALTH

119. The school population increased from 260,444 in 1957, 295,481 in 1958, an increase of 35,037. There were 702 schools compared with 668 schools in the previous year. School Health Officers examined 74,058 school children; this represents a drop of some 6,000 over the previous year, but the main reason for this was that School Health Officers were diverted to work in the Poliomyelitis Vaccination Campaign during the epidemic. Out of a total of 595 Government and Government Aided schools 528 were visited either by a Health Officer or a Lady Health Officer or both.

The new Institute of Health in which the School Health Service is now accommodated was occupied in May of this year. It provides adequate accommodation for both clinic and administrative offices.

QUARANTINE SERVICES

120. The Quarantine Services were alerted on two occasions during the year. At the beginning of the year there continued a large population movement of persons of Dutch origin from Indonesia to Europe who passed through Singapore. In view of this abnormal population movement of persons who were travelling as evacuees or refugees, Government decided to impose additional quarantine restrictions on all such persons. All evacuees were subject to surveillance and evacuee camps on the main island were subject to control for 48 hours to permit full medical inspection of all evacuees in camps.

121. During the middle of the year a major epidemic of cholera broke out in Thailand which appeared to involve Bangkok and other provinces of the south. This called for increased surveillance against travellers from that country. Additional precautions in the way of the immunisation of frontline personnel of the port and airport of Singapore as well as the prohibition or supervision of the import of certain categories of foods was imposed. In addition all aircraft from Bangkok landing at the International Airport at Paya Lebar were checked for flies for a period of two months.

TABLE 21

SUMMARY OF QUARANTINE SERVICES

	1955	*1956*	*1957*	*1958*
Ships arriving from infected or suspected ports	1,783	1,849	1,519	2,030
Sea passengers inspected ...	116,275	95,779	101,182	136,226
Aircraft arriving from infected or suspected ports	1,315	1,647	1,707	2,438
Air passengers and crew inspected	45,976	71,600	82,166	94,718
Passengers quarantined ...	20,537	33,834	24,175	14,421

122. The year 1958 was one when the health services put to the test by additional strains imposed by the health conditions outside Singapore as well as the major epidemic of poliomyelitis in Singapore. It was also a period of considerable administrative change and re-organisation and in all these activities the Health Branch discharged its duties satisfactorily.

123. Dr. K. Sivam, L.M.S. (Singapore), D.P.H. (Liverpool), the Assistant Director of Medical Services (Health) was in charge of the Health Branch during the year.

Chapter Five

INFECTIOUS DISEASES IN RURAL SINGAPORE

124. No case of cholera, plague or small-pox occurred in the year under review. The number of cases of infectious diseases notified from the rural area is given in Table 22.

Table 22

INFECTIOUS DISEASES IN RURAL SINGAPORE

	1954	*1955*	*1956*	*1957*	*1958*
Chicken-pox	359	414	447	350	175
Pulmonary Tuberculosis ...	613	610	654	385	342
Diphtheria	81	119	114	159	158
Leprosy	34	39	31	30	21
Puerperal Fever	60	24	24	4	5
Enteric Fever	26	44	25	33	31
Acute Anterior Poliomyelitis ...	34	15	20	17	148

PULMONARY TUBERCULOSIS

125. The total number of cases of pulmonary tuberculosis reported in 1958 was less than in 1957 and nearly half the number reported in 1956; this is despite the fact that the Mass Radiographic Survey done in two selected rural areas brought out a number of cases.

DIPHTHERIA

126. The number of diphtheria cases has also stabilized at the previous year's level. The programme of immunisation in the Maternal and Child Health clinics, in schools and in *kampongs* continued with very satisfactory response until it was stopped in October when the poliomyelitis epidemic occurred.

ENTERIC FEVER

127. The occurrence of sporadic cases from isolated areas was the main feature of this disease during 1958. No localised outbreaks took place.

128. The presence of a large number of unlicensed food hawkers, particularly dealers in cold food and drinks, is a potential threat to public health. These unlicensed hawkers often have inadequate sanitary and washing facilities and are not subject to medical examination.

LEPROSY

129. The progressive decline in the cases of this disease over the past five years confirms the view that it is being brought under control.

POLIOMYELITIS

130. A major outbreak of poliomyelitis involving the whole island occurred in Singapore from October–December 1958. The epidemic was a Type I epidemic and the original cases appear to have originated in the Serangoon area towards the end of September. From here the disease spread to involve the City and other rural areas.

131. The Government Health Division carried out a major programme of oral vaccination with attenuated live poliomyelitis vaccine (made available by Professor Albert Sabin of the U.S.A.). Over 200,000 children were immunised at some 23 centres in all parts of the City and the rural areas during October–December. The results of the vaccination campaign on the course of the epidemic and on the problems of immunity are being assessed. A fuller report on the epidemic will be published later.

Chapter Six

HYGIENE AND SANITATION IN RURAL AREAS

132. The Rural Health Division has been responsible for hygiene and sanitation in the rural areas of Singapore, including the islands around the Colony. The year 1958 was one of immense administrative changes preparatory to the establishment of Rural District Councils.

133. The area now under the Rural Board will with some changes of boundary, form four District Councils under the provisions of the new Local Government Ordinance, 1957. The three Councils on the main Island will be the Katong District Council, Serangoon District Council, and the Bukit Panjang/Jurong District Council. The islands to the south of Singapore will constitute the area of the Southern Islands Council.

134. A feature of the new set-up of local authorities will be the decentralisation of health activities to District Health Officers. Health Officers with some experience and all of them in possession of the Diploma in Public Health, will be posted to take charge of the Health Departments of the new Councils. However, it will be essential that even in the future new local authorities, the experience and advice of senior officials of the Health Ministry will be necessary and essential in matters of public health policy and programmes.

135. The staff of the Rural Health Division as on 31st December, 1958 is given in Table 23. Dr. Lai Kuen Yee, M.B., B.S., D.P.H., was in charge of the Division until May 1958. In June, the Rural Health Division was decentralised into three separate areas. The Health Officers posted to the future District Councils are Dr. Tan Kah Hong, M.B., B.S., D.P.H. (Bukit Panjang/Jurong), Dr. J. Charan Singh, M.B., B.S., D.P.H. (Katong) and Dr. W. K. Ng Cheng Hin, M.B., B.S., D.P.H. (Serangoon).

Table 23

STAFF OF THE RURAL HEALTH SECTION

	Central Government	*Bukit Panjang*	*Serangoon*	*Katong*	*Total*
Rural Health Officer	1	1	1	1	4
Public Health Engineer ...	1	—	—	—	1
Supervisor of Public Health Works	—	1	1	1	3
Chief Sanitary Inspector ...	1	—	—	—	1
Senior Sanitary Inspector ...	1	1	1	1	4
Sanitary Inspectors, Timescale ...	4	3	4	3	14
Probationer Sanitary Inspectors ...	—	2	3	3	8
Senior Technical Subordinates ...	2	—	1	1	4
Technical Subordinates ...	6	6	7	7	26
Market Inspector/Overseer ...	—	2	4	1	7
Piggery Overseer	—	1	1	2	4
Labourers	112	163	152	190	454

136. Since May 1954 until the end of 1958, conservancy and cleansing services have been carried out by a separate Cleansing Section of the Rural Board. From 1959 onwards, the Cleansing Section will be decentralised and integrated with the Health Department under the District Council's Health Officer. During the year Mr. S. Doraisamy was the Superintendent of the Rural Cleansing Section.

TABLE 24

STAFF OF THE RURAL CLEANSING SECTION

	Central Government	*Bukit Panjang*	*Serangoon*	*Katong*	*Total*
Superintendent, Rural Cleansing ...	1	—	—	—	1
Senior Cleansing Inspectors ...	—	1	1	1	3
Cleansing Inspectors	—	3	3	3	9
Technical Subordinates ...	—	3	2	3	8
Overseers	—	5	8	11	24
Labourers	—	161	251	344	756

137. The Sanitary staff of the Rural Health Branch in the various districts has been concerned with anti-malarial control (oiling and drainage), water supplies, inspection of houses and housing sites, water-borne system of sewerage disposal, food inspection, occupational health, village sanitation and control of infectious disease. The staff of the Cleansing Section is responsible for scavenging and conservancy services in the rural areas.

MALARIA CONTROL

138. For the sixth consecutive year Singapore had yet another year of freedom from malaria transmission. The climate and ecological conditions here are such that the country is potentially malarious. The malaria organisation must be ever vigilant because out of 2,842 different anopheline collections made in routine surveys during the year 161 were found to be *A. maculatus* and 90 were *A. sundaicus*. With the decentralisation of malaria control to the future District Councils, the overall co-ordination of malaria programmes and check surveys by the Central Malaria Laboratory are essential.

139. The Department still depends on anti-larval measures in the control. Such measures consisted of subsoil drainage, permanent surface drainage or oiling of different breeding places for *A. maculatus* and *A. sundaicus*. Residual spraying which has taken such a prominent place in malaria control in other parts of the world is considered of limited value in Singapore. Limited use, however, is made of this procedure in the surrounding islands and around Paya Lebar Airport.

140. Apart from malaria control, mosquito complaints from the public as well as from Government premises were dealt with.

141. Seventeen experiments on anti-malarial oil samples submitted for tender were tested in the laboratory for toxicity, spreading pressure, viscosity, permanency of oil films during the year.

MALARIA SURVEYS

142. 473 rural malaria surveys were carried out and the summary total of the various mosquito specimen collected on these surveys are tabulated below:

A. maculatus	...	...	161 collections
A. sundaicus	...	...	85 collections
A. karwari	...	...	9 collections
A. baezai	...	...	51 collections
A. leucosphyrus	...	...	3 collections
A. aitkeni	...	...	1 collection
A. hyrcanus	...	...	1,429 collections
A. kochi	...	...	1,050 collections
A. vagus	...	...	41 collections
A. separatus	...	...	12 collections
A. barbirostris	...	...	—
A. letifer	...	...	—

SPECIAL SURVEYS

143. Eighty special surveys were carried out during the year to investigate notifications of malaria cases, for bringing new areas under anti-malaria control because of development and in attending to mosquito, fly and other insect pest complaints. The following collections of mosquitoes were made during these surveys:

A. maculatus	...	...	—
A. sundaicus	...	...	5 collections
A. karwari	...	...	2 collections
A. baezai	...	...	1 collection
A. hyrcanus	...	...	23 collections
A. kochi	...	...	19 collections
A. vagus	...	...	3 collections
A. separatus	...	...	1 collection
Aedes Stegomyia	...	..	149 collections
Culex	...	. .	109 collections

Yellow Fever Control—Singapore Airport

144. Aedes Stegomyia mosquito control within the Airport Proper and 880 metres from the airport perimeter fence had been carried out vigorously as in previous year and as a result not a single collection of Aedes (S)ægypti, the domiciliary yellow fever vector, was made during the year within the control areas. The Aedes Index for the year 1958 is given in Table 30.

145. In addition to weekly checking of the 122 artificial check points in the control areas quarterly surveys were made around Paya Lebar to assess the Aedes Index. Fifty-eight surveys were made and the data is given in Table 30.

AEDES (STEGOMYIA) SURVEYS 1958

146. The usual measures practised during previous years was satisfactorily maintained during 1958. This included clearing of artificial containers, check surveys, destruction of natural breeding places and clearing of secondary vegetation.

Residual Spraying

147. Spraying of houses in the controlled area around the International Airport and in the Southern Island was done once in four months.

Swing Fogging

148. Swing fogging operations were carried out on eight occasions using 60 gallons of dieldrin emulsifiable concentrate.

TABLE 25

WORK DONE UNDER AIRPORT DRAINAGE SCHEME

Large sized channel drains constructed	...	87 yards
Small sized channel drains constructed	...	89 yards
Subsoil pipes laid	...	1,495 yards
Tube well constructed ...	...	1
Anti-malarial wells constructed ...	...	2
Retaining walls constructed ...	...	3

New Oiling Areas

149. *Bukit Panjang.*—Routine oiling was extended to areas around the new Sewage Works at Ulu Pandan and in the West Coast area around the prawn ponds. The oiling at the new oil installation at Tanjong Penjuru is done by the Petroleum Company.

150. *Katong.*—In this district oiling was extended to the Tampenis Road 12 m.s. area where recurrent *A. sundaicus* breeding occurred; also to the ravines adjacent to Jalan Tiga Ratus.

Malaria Cases

151. Sixteen malaria cases were reported during the year. Every case was fully investigated as to the probable origin of the case was as follows: Johore 7 cases, Negri Sembilan 3 cases, Perak 2 cases, Penang 1 case and Indonesian islands 3 cases. Eight of the cases were subtertian malaria and the remaining cases were benign tertian malaria; of the latter eight at least five gave a history suggestive of a relapse of benign tertian malarial infection.

152. Besides checking on the patient a full malaria and mosquito survey of the area where the patient lives is done to ensure that there has been no breakdown, however minor, in the malaria control services.

TABLE 26

SUMMARY OF ANTI-MALARIAL DRAINAGE WORK, 1958

Permanent channel drains constructed	...	5,060 yards
Permanent channel drains repaired	...	2,979 yards
Permanent channel drains maintained	...	237,918 yards
Subsoil drains constructed ...	...	4,154 yards
Subsoil drains repaired ...	...	6,418 yards
Earth drains constructed ...	...	10,649 yards
Earth drains maintained ...	...	543,882 yards

Anti-malarial Materials

153. The amount of anti-malarial oil used was 116,692 gallons. 542 gallons of kerosine was used in controlling breeding in seepage wells, and 3,420 gallons of residual insecticides (B.H.C. and Dieldrex) were used in residual spraying of the Southern Islands, and around the International Airport.

WATER SUPPLIES

154. The Rural Board continued to follow the policy of previous years in extending pipe water supplies to as much of the rural areas as possible. In furtherance of this policy Health Officers investigated and recommended sites for 112 standpipes in suitable areas. The total number of standpipes installed during 1958 was 149. Washing platforms with concrete base and drainage facilities were provided for 40 standpipes.

155. During the dry weather, it was again necessary to send water wagons to affected areas on the main island; water boats were regularly sent to the Southern Islands.

FOOD HYGIENE

156. With the progressive urban development of the rural areas, the problems of food hygiene become more urgent and intense. The amended Food and Drug Regulations have now been in operation for over a year and give better control.

Food Sampling

157. Sanitary Inspectors took 127 formal samples of food, of which 62 samples were of milk. Among the articles sampled were: vinegar, sauce, canned meat, edible oil, soft drinks, soya bean milk, coffee powder. Court action was instituted against vendors of four of these samples while in some cases where the offence was technical or due to oversight, the vendors or manufacturers were warned.

Food Factories

158. There are now a fair number of food factories in the rural areas. Eight of these operate on a large-scale and prepare food, sauce and soft drinks for local sale as well as export.

Control of Food Hawkers

159. There continues to be a regular increase of food hawkers in all parts of the rural areas. These hawkers, many of them unlicensed, constitute a health menace as they ply their trade in very insanitary circumstances, completely oblivious to elementary standards of hygiene. The health personnel have during the year made vigorous efforts to deal with the problem.

Routine Inspections

160. Inspections of food shops, supervision of markets and food hawkers was regularly done. 9,241 inspections of food shops, 2,625 inspections of markets and 15,433 checks as food hawkers were done during the year.

CLEANSING SERVICES

Scavenging

161. Since the beginning of the year the Rural Board has waived the charges for the removal of domestic refuse. Only the charges for the removal of trade refuse are in force.

162. During the year a total of 3,705,000 cubic feet of refuse was collected and disposed of.

163. Approximately 120 miles of roads, streets, lanes and by-lanes are swept daily in the rural area. Drains in public roads and back-lanes are attended to.

Collection of Refuse

164. In the well laid-out areas and housing estates, mechanised transport is used for collection and transportation of refuse to disposal sites from houses

and trade premises. The types of vehicles in use are: (i) refuse carriers with side shutters; (ii) dual tippers with gravity packing; (iii) specially designed Land Rovers; (iv) earth tippers and open trucks.

165. In areas where localised disposal is in vogue, removal of refuse is by means of steel handcarts which are of three main types:

(i) the 'Penang' type which has a larger capacity for holding refuse and requires more than one labourer to handle;

(ii) the 'Helicopter' or 'Coffin' type which has a roof-like cover with a lighter weight and

(iii) the 'Carrier' type which has two bins attached and can be managed by a single labourer.

166. Householders are required to provide small covered-metal receptacles for domestic refuse. In the main villages the Rural Board has provided a number of bin centres with large covered metal bins for receiving village refuse until removal by lorries or handcarts to the disposal ground.

167. During the year a number of litter bins were ordered and placed near bus stops and parks for the use of the public.

Disposal of Refuse

168. The methods adopted for the disposal of refuse in the districts were: (i) controlled tipping, (ii) composting and (iii) incineration.

169. Controlled tipping if properly managed, is possibly the best and economical method available for the disposal of refuse. It also helps to reclaim low-lying swamp areas. Lack of suitable and adequate sites even in the rural areas has retarded the progress in this direction.

170. Composting is done by mixing nightsoil with refuse in definite proportions with periodical turning it is 'matured' and ready for use. The 'Calcutta' and 'Indore' systems are practised.

171. Compost is supplied free to those who require it. A nominal charge is made for transport.

Revenue

172. The revenue realised from the trade premises, the sale of compost and removal of refuse from temporary *wayang* sheds amounted to $90,676.90.

Conservancy

173. Unlike the scavenging service which is a direct removal system, the conservancy is let out partly on contract. Only in Bukit Timah, Bukit Panjang and Serangoon Districts is a direct removal system being carried out.

174. Disposal of nightsoil was mainly by composting and trenching. Here again is the problem of scarcity of suitable land for trenching purpose crops up as more and more areas are taken up for housing and factory sites.

175. The number of labourers employed by the Rural Board for direct nightsoil removal was 65. Nine vehicles were used for the service.

176. 10,199 buckets were serviced daily; 3,993 by direct removal and 6,206 by contract removal.

VILLAGE SANITATION

177. The programme of village sanitation initiated in 1954 was continued during 1958. Since the inception of the scheme, 54 villages have been brought into the scheme, 12 being in 1958.

INDUSTRIAL AND OCCUPATIONAL HEALTH

178. Routine inspection and normal supervision of hygiene aspects of industrial premises continued during the year. It is expected that with new legislation introduced this year (Factories Ordinance) there will be more effective powers to insist on improved standards of hygiene, sanitation and safety.

TABLE 27

INDUSTRIAL CONCERNS IN THE RURAL AREAS, 1958

Rubber mills, smoke houses and rubber products ...	36
Woodworking, furniture making and sawmills	14
Humes, asbestos and drums and metal works	11
Granite quarries, brickworks and lime making	26
Gases and bitumen products	3
Rattan bleaching	3
Lead recovery and tin smelting	2
Sago washing	6
Chewing gum base manufacture	3
Yarn and rope manufacture	1
Perfume packing factory	1
Battery manufacture	1
Shoe polish factory	2
Shoe factory	1
Assembly of cars and trucks	1
Soap factory	14
Food factories, refining oil, sauce making, coffee or rice grinding, food canning and vermicelli making	55
Pineapple canning	2
Can making	2
Bakeries and cake shops	39
Brewing beer and stout	1
Creameries and milk packing	2
Tannery	5
Candle making	2
Paper products manufacture	3
Glass and lamps manufacture	1
Manure making	1
Incense making	1
Total ...	239

Note:—There are a number of small family establishments where no outside workers are employed; these are not included in the above list.

SEPTIC TANKS AND SANITARY INSTALLATIONS

179. The tempo of building development in the rural areas continued to increase. More housing estates and individual houses were being provided with water borne systems of sewage disposal.

Most of the septic tanks constructed during the year were for small individual houses. The Rural Board type of septic tank with a soakaway system proved to be the most popular, being efficient in use and economical to construct and maintain. A number of big septic tanks serving housing estates were being constructed during the year; four of the bigger tanks having capacities of over 90,000 gallons each, and being able to treat altogether the sewage from population of over 12,000 people. A sewage pumping station was also constructed at Opera Estate, pumping sewage from a part of this estate to the City Council sewer.

180. Hitherto, the design of sewage disposal plants for housing estates in the rural areas had been based on the Imhoff pattern followed by biological filtration of the effluent, but this year saw the introduction of the activated sludge method of sewage purification in the rural areas. While the process is not new (the City Council sewage disposal plant at Kim Chuan Road being an activated sludge plant using diffused air) its application to the treatment of sewage from housing estate in the rural areas of Singapore had never been seriously considered by the estate developers until now. Chief advantages claimed for this process are that initial outlay is usually cheaper than conventional methods. Smaller areas of land are required and there is no smell or psychoda fly nuisance.

181. Two activated sludge plants were constructed (one a 'Simplex' plant, and the other an 'Infilco' plant) each capable of treating sewage from a building estate of over 3,000 people.

182. Although most developers realize the appreciation in value of their property after installation of modern sanitation, there were still a number of applications for the construction of new houses using only bucket latrines. It is believed that this is possibly due to the relatively high cost of installation of a water borne system and septic tanks.

183. Only three applications for the installation of chemical closets were received and approved.

184. A total number of 64 septic tanks having a total combined capacity of 231,434 gallons and capable of treating the sewage of approximately 9,290 people from about 1,550 houses were completed and taken over by the Rural Board for maintenance. Fifty more septic tanks were still under construction. There were altogether 544 septic tanks of various capacities in the rural areas up to the end of 1958.

TABLE 28

SEPTIC TANKS CONSTRUCTED IN 1958 AND TAKEN OVER FOR ROUTINE MAINTENANCE

Capacity in Gallons	*Septic Tanks with Filters*	*Septic Tanks with Soakaways*	*Total No. of Tanks*
Under 500	1	16	17
501 — 1,000	9	23	32
1,001 — 2,000	2	—	2
2,001 — 5,000	2	—	2
5,001 — 10,000	4	—	4
Over 10,000	7	—	7
Total ...	25	39	64

Note:—The above 64 septic tanks have a total combined capacity of 231,434 gallons and will be able to treat the sewage of approximately 9,290 people from about 1,550 houses.

HOUSING

185. The steady flow of City dwellers making their homes in the rural areas continued during the year. Among the larger housing developments in progress were: Bukit Timah Park, Changi Road 12 m.s., Eden Park, Frankel Estate, Guan Soon Estate, Hong Kong Park, Joo Yee Homes, Namly Park, Opera Estate, Seletar Hills Estate, Sembawang Hills Estate, Springs Park, Woodlands Garden.

186. The increase of development carries with it certain health risks. Many of these are situated in areas which were previously agricultural and often with farmers and pig-rearers still working and living on the land adjacent to these housing estates.

187. New resettlement areas, such as at Rifle Range, Bukit Timah and 12 m.s. Jurong, are being opened up and the problems of health and sanitation in these areas have received the attention of the Rural Health Division.

188. The construction of agricultural roads in many parts of Rural Singapore has facilitated health services including more frequent and effective inspections of outlying areas.

189. During the year health staff dealt with 279 layouts of site for development under the Singapore Improvement Ordinance; 506 plans were commented upon in respect of health requirements.

TABLE 29

PROSECUTIONS DURING 1958

——	Bukit Panjang	Serangoon	Katong	Total Number of Cases	Total Fines
Municipal Ordinance, Chapter 133 (1936 Edition)—					
Under Section 194 (Hawkers' Stalls)	174	126	11	311	2,645
Under Section 195 (Itinerant Hawkers)	47	140	8	195	1,329
Under Section 211 (Offensive Trades)	5	12	8	25	880
Under Section 246 (Nuisance Notice)	3	..	..	3	71
Under Section 247 (Nuisance Order)	..	..	..	..	..
Under Eating House Bye-laws	16	..	5	21	336
Under Piggery Bye-laws ..	38	21	7	66	565
Under Perishable Food Bye-laws	..	1	12	13	605
Under Market Bye-laws ..	..	20	9	29	295
Food and Drugs Ordinance, Chapter 148	2	..	7	9	630
Destruction of Mosquitoes Ordinance, Chapter 139 ..	..	..	5	5	160
Total ..	285	320	72	677	7,516

TABLE 30

AEDES (STEGOMYIA) SURVEYS 1958

Month	Number of Surveys	Number of houses checked	Number of *Aedes* (*S*) *aegypti* collections	Number of *Aedes* (*S*) *albopictus* collections	Number of *Aedes* (*S*) *scutellaris* collections	Number of *Aedes* (*A*) *obturban* collections	Number of *Culex collection*	*Aedes Stegomyia* Index
								Per cent
March	14	1,217	Nil	12	1	4	11	1.06
June	14	1,238	Nil	19	Nil	1	5	1.53
September	15	1,214	Nil	19	Nil	3	9	1.56
December	15	1,213	Nil	21	Nil	4	7	1.73
Total ..	58	4,882	Nil	71	1	12	32	..

TABLE 31

SPECIAL SURVEYS 1958

Month	Total No. of surveys made	*A. maculatus*	*A. karwari*	*A. sundaicus*	*A. baezai*	*A. leucosphyrus*	*A. aitkeni*	*A. hyrcanus*	*A. kochi*	*A. vagus*	*A. separatus*	*A. barbirostris*	*A. letifer*	*Aedes Stegomyia*	*Culex*
January ..	12	..	2	5	..	..	..	8	10	..	1	..	..	13	6
February ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
March	1	..	..	..	..	..	..	2	2	..	..	..	..	19	22
April	18	..	..	..	..	..	..	..	..	..	..	..	..	36	45
May	1	..	..	..	..	..	..	4	1	3	..	..	..	..	..
June	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
July	15	..	..	..	..	..	..	1	..	..	..	..	..	31	15
August	1	..	..	..	..	..	..	..	..	..	..	..	..	12	3
September ..	1	..	..	..	..	..	..	5	3	..	..	..	..	..	..
October ..	14	..	..	..	..	..	..	..	..	..	..	..	..	19	9
November ..	1	..	..	..	1	..	..	3	3	..	..	..	..	..	..
December ..	16	..	..	..	..	..	..	..	..	..	..	..	..	19	9
Total ..	80	..	2	5	1	..	..	23	19	3	1	..	..	149	109

TABLE 32

RURAL MALARIA SURVEYS 1958

Month	Total No. of surveys made	*A. maculatus*	*A. karwari*	*A. sundaicus*	*A. baezai*	*A. leucosphyrus*	*A. aitkeni*	*A. hyrcanus*	*A. kochi*	*A. vagus*	*A. separatus*	*A. barirostris*	*A. letifer*
January	35	17	..	3	8	..	..	87	96	2	2	..	..
February	33	15	..	7	1	..	..	101	95	..	2	..	..
March	45	15	..	3	6	1	1	151	79	1	2	..	..
April	28	13	1	4	2	..	..	99	51	4	..	..	..
May	39	6	1	10	5	..	..	121	92	10	1	..	..
June	34	7	2	2	..	..	..	93	84	2	..	..	..
July	42	13	..	12	13	..	..	101	92	5	1	..	..
August	41	16	2	11	4	1	..	116	89	1	..	..	..
September	47	14	2	10	4	1	..	150	117	4	2	..	..
October	46	16	1	10	6	..	..	138	99	6	1	..	..
November	44	4	..	7	2	..	..	158	90	3	1	..	..
December	39	25	..	6	..	..	..	114	66	3	..	..	..
Total ..	473	161	9	85	51	3	1	1,429	1,050	41	12	..	..

Chapter Seven

MATERNAL AND CHILD HEALTH SERVICE IN THE RURAL AREAS

190. The year 1958 saw continued expansion of the Maternal Child Health Service in the rural areas of Singapore. The Service was crowned with two successes.

191. In the New Year Honours List, the Public Health Matron, Mrs. M. E. Perera, received the award of M.B.E. for her services to Maternal and Child Health.

192. In February, the Kettering Shield was awarded to the Maternal and Child Health Service (Rural Areas) Singapore by the National Baby Welfare Council in London for outstanding achievements in the field of Maternal and Child Health since 1954. This shield which was won in a competition for all British Colonial territories will be held by the Maternal and Child Health Service (Rural) for three years until 1960. The shield was formally presented at a ceremony at the Institute of Health on 16th October, 1958 by the Hon. Mr. A. J. Braga, the Minister for Health on behalf of the National Baby Welfare Council, London.

Staff

193. The staff of this Service consisted of 11 Medical Officers, 1 Public Health Matron, 12 Health Sisters, 39 Health Nurses and 68 Health Midwives. Dr. (Mrs.) M. Calderwood, M.B., Ch.B. (Man.), D.P.H. (Eng.) was in charge of the Service.

Maternal and Child Health Clinics

194. There are three types of Maternal and Child Health Clinics at present, i.e.

	1956	*1957*	*1958*
Main clinics (resident midwives 2–6) ...	28	19	20
Midwife centres (resident midwife) ...	4	7	8
Visiting centres (non-residential) ...	24	25	25

The following new clinics were opened in 1958:—

Main clinic	1 (Keh Hai Road)
Visiting centre	1 (Marsiling Road—replaces Woodlands)

TABLE 33

MATERNAL AND CHILD HEALTH CENTRES AS ON 31ST DECEMBER, 1958

Bouna Vista.
Holland Road.
Bukit Timah.
Jurong 12½ m.s.
Jurong 18 m.s.
Bukit Panjang.
Ama Keng.
Mandai.
Thomson Road.
Yio Chu Kang.
Lim Ah Pin.
Kim Chuan Road.
Kampong Batak.
Bedok 9 m.s.
Ulu Bedok.
Changi.
Sembawang.
Keh Hai Road.
Pulau Brani.
Pulau Tekong.

Bulim.
St. John's Island.
Sungei Tengah.
Kuala Loyang.
Somapah.
Jurong 10 m.s.
Lim Chu Kang 18 m.s.
Pulau Ubin.

Tanjong Penjuru.
Race Course.
Princess Elizabeth Estate.
Tanjong Kling.
Marsiling Road.
Tanjong Murai.
Kampong Blukang.
Kampong Bajau.
Damar Laut.
Pulau Sudong.
Pulau Semakau.
Pulau Seking.
Pulau Seraya.
Pulau Bukom Kechil.
Lazarus Island.
Pulau Ayer Merbau.
Pulau Samulun.
Pulau Ayer Merlimau.
Sembawang 15 m.s.
Chia Keng Village.
Ayer Gemuroh.
Pulau Ubin.
Ponggol.
Kampong Loyang.
Pulau Sebarok.

TABLE 34

SUMMARY OF WORK DONE IN MATERNAL AND CHILD HEALTH CENTRES

	1956	*1957*	*1958*
Home visits by (*a*) Health Nurse	66,821	50,847	33,106
(*a*) Health Midwife	61,836	58,211	54,141
Nursing visits by Midwives	45,637	45,333	40,203
Confinements attended	8,553	7,961	7,750
Mothers in labour to hospitals	671	551	486
Clinic attendances			
Infants (0–1 year)	121,756	134,481	131,302
Children (over 1 year)	79,317	76,325	75,556
Antenatal	62,035	65,602	77,391
Postnatal	6,708	4,215	3,186
Family Planning (new cases)	949	917	1,187
Family Planning (repeat cases)	2,440	2,925	4,411
Primary vaccinations	13,428	13,253	16,135
Diphtheria Immunisation			
P.T.A.P. 1st dose	13,524	9,405	2,604
2nd dose	10,665	8,974	2,795
Booster	641	5,354	6,062
Kampong Diphtheria Immunisation Campaign			
P.T.A.P. 1st dose	6,126	4,476	2,445
2nd dose	3,665	3,578	1,800
Booster	—	1,099	1,411
Triple Antigen Immunisation			
Diphtheria' Whooping Cough and Tetanus — 1st dose ...	851	15,507	25,717
Diphtheria' Whooping Cough and Tetanus — 2nd dose ...	575	12,882	12,968
Diphtheria' Whooping Cough and Tetanus — 3rd dose ...	407	10,135	12,265
Diphtheria' Whooping Cough and Tetanus — Booster ...	—	488	1,751

TABLE 34—*continued*

	1956	*1957*	*1958*
B.C.G. Vaccination (Island wide from May 1958)	221	517 (2 clinics only)	2,994
Tuberculin Tests—Negative	1	188	134
Positive	2	163	75
Non-notifiable Infectious Diseases			
Whooping Cough	n.a.	507	198
Measles	n.a.	116	256
Mumps	n.a.	7	10
Free Milk Distribution			
1. Milk to ante-natal mothers (in lb.) ...	10,186	10882.5	17.667
Number of mothers	11,787	11,211	17,667
2. Milk to children (in lb.)	27,487	21,089	21544.5
Number of children	31,363	22,344	23,266
3. Total amount of powdered milk (in lb.) ...	37,673	31871.5	39211.5

Maternity Services

195. *Ante-natal Care.*—The standard of ante-natal care remained high throughout the year. Complete medical cover was possible at all times because of adequate numbers of Clinic Medical Officers.

196. The weekly midwife ante-natal sessions in the main clinics and the daily midwife ante-natal sessions in the kampong midwife centres proved to be of great value in maintaining the 'umbrella' of ante-natal care in the rural areas.

197. There were 5,831 babies born to rural mothers in 1958, an increase of 276 over 1957.

198. The high incidence of anæmia amongst the ante-natal mothers persisted in spite of constant teaching in the clinics and in the homes. The response to modern treatment in all clinics was good.

199. *Post-natal Care.*—The attendances of the mothers at the post-natal clinic remained disappointing. Shortage of Health Nurses prevented adequate health education and advice in the homes.

200. *Domiciliary Midwifery.*—The Health midwives from the main clinics and kampong midwives centres attended 8,043 births in the rural area which was 31.2 per cent of all the rural births.

201. The Class 'C' *bidans* were still closely supervised to maintain a high standard of work.

TABLE 35

DOMICILIARY MIDWIFERY STATISTICS—RURAL AREA

	1955	*1956*	*1957*	*1958*
Total number of live and still births in the rural area	15,589	16,749	16,462	25,768
Confinements in Kandang Kerbau Hospital	1,883	3,356	5,556	5,831
Confinements attended by Government midwives	7,852	8,553	7,961	8,043
Confinements attended by private midwives Class B	4,766	4,560	5,483	6,452

202. There were 68 Health midwives working in the rural areas in 1958 and they were responsible for 31.2 per cent of the deliveries in the area.

Supervision of Midwives

203. A Health Sister trained in Britain with the Health Visitor and District Nursing certificates continued to supervise the work of the Health midwives, private midwives and Class 'C' *bidans* in the rural areas. This maintained the liaison and co-ordination between all the three types of midwives in the rural areas.

Child Health Clinics

204. The attendances at the Infant Welfare clinics (0–1 year age) were only slightly less than for the previous year. The anterior poliomyelitis epidemic from September to December was responsible for keeping the babies away from the clinics as the public had been advised to avoid crowds.

205. The drop in attendances of the pre-school children also could be accounted for by the anterior poliomyelitis epidemic.

206. Since all the main clinics had a medical officer in 1958, there was more adequate medical cover in all the children's clinic sessions than ever before.

Immunisation

207. *B.C.G. Vaccination.*—The pilot experiment for B.C.G. vaccination in two rural clinics which was started in July 1956, became island wide in May 1958. A vaccination team based on Tan Tock Seng's Hospital visited every main clinic in the rural area on a monthly roster and the response from the parents was most encouraging. Fortunately it was not deemed necessary to cancel the B.C.G. vaccination during the anterior poliomyelitis epidemic and so the figures for vaccinations remained steady and very satisfactory.

208. *Diphtheria, Whooping Cough and Tetanus.*—The immunisation against diphtheria, whooping cough and tetanus in all the rural clinics was most satisfactory, but it was cancelled for the duration of the anterior poliomyelitis epidemic. The figures for the year 1958 are therefore not as high as they would have been if there had been no interruption in the service.

209. There was a marked drop in the number of cases of whooping cough which was most gratifying. The incidence of diphtheria for 1958 was 144 as compared with 159 in 1957.

Supervision of Transferred Children

210. This supervision continued throughout 1958 by the original Health Sister who was made responsible in 1957, and she worked in close co-operation with the Protector of Children and Young Persons in the Department of Social Welfare.

Foster Children

211. The pilot experiment of 1956, grew into an established procedure in 1958 and 50 foster mothers were available for needy babies.

Maternal and Child Health—Islands of Singapore

212. The standard of Maternal and Child care was the same as that in the clinics of the main Island of Singapore. A team consisting of a Lady Medical Officer, Health nurse and Health midwife, together with a Hospital

Assistant, visited the islands weekly in the Floating Dispensary *Seraya* throughout the year. Bi-weekly out-patient sessions on the islands appeared to be much appreciated by the islanders.

Teaching

213. The Lady Medical Officer, Maternal and Child Health Service and Senior Nursing staff assisted in the Public Health Nursing Course.

TABLE 36

VITAL STATISTICS—RURAL AREA

——	1954	1955	1956	1957	1958*
Maternal deaths	33	12	15	11	22
Live births	15,867	15,589	16,576	16,286	25,348
Still births	171	171	173	176	420
Total births	16,038	15,760	16,749	16,462	25,768
Perinatal deaths (first 7 days of life)	n.a.	n.a.	n.a.	n.a.	298
Neonatal deaths (first 4 weeks of life)	243	240	203	180	413
Infant deaths (from 4 weeks to 1 year old)	752	697	647	570	1,077
Maternal mortality (deaths per 1,000 live and still births) ..	2.05	.76	.89	.66	.85
Perinatal mortality (Still births and deaths in 1st week of life)	n.a.	n.a.	n.a.	n.a.	27.8 per 1,000 total births
Neonatal mortality (number of deaths per 1,000 live births)	15.3	15.4	12.3	11.0	16.2
Infant mortality (number of deaths per 1,000 live births)	47.3	44.7	39.0	34.9	42.4
Still birth rate (number of still births per 1,000 total births)	10.7	10.8	10.3	10.6	16.2
Total number of babies under 1 year attending clinics ..	n.a.	n.a.	15.609	16,295	17,026

Note:—

* In the registration of vital data, all information is corrected to place of usual residence and not by registration area in 1958.

Chapter Eight

QUARANTINE SERVICE

214. The Quarantine Service comprises three closely related sections—the Marine Port Health Service, the Airport Health Service and the Quarantine Station.

Staff

215. Staff position at the end of the year is given in Table 37.

Table 37

STAFF OF THE QUARANTINE SERVICE AS ON 31ST DECEMBER, 1958

——	Health Officers	Lay Superintendent	Sanitary Inspectors	Technical Subordinates	Hospital Assistants	Midwife
Marine Port Health Service	3	..	2	1	1	..
Airport Health Service	1	..	1	..	4	..
Quarantine Station ..	..	1	..	2	2	1
Total ..	4	1	3	3	7	1

216. The occurrence of epidemic cholera in Thailand and disturbed conditions in Indonesia with outbursts of epidemic small-pox in its outer provinces called for intensifications of quarantine measures during 1958.

217. During the first two months of the year there was a large population movement of persons of Dutch origin from Indonesia to Europe through Singapore. Additional quarantine restrictions, in view of this population movement, were imposed. All evacuees were subject to surveillance. Dutch evacuee camps on the main island were subject to control for 48 hours to permit full medical inspection of all evacuees in camps.

218. During the middle of the year the cholera epidemic in Thailand called for increased surveillance against travellers from that country. Additional precautions taken included the immunisation of Port and Airport personnel, the prohibition or supervision of certain categories of food imports, in particular raw vegetables, etc. and strict surveillance of passengers.

219. All aircrafts from Bangkok landing at the International Airport at Paya Lebar were checked for flies to assess the danger of transmission of cholera by this route from 13th June to 16th August, 1958. A total of 74 aircrafts were checked and 146 collections of common house flies, mostly alive, were made. The following insects were caught in the planes checked:

Musca domestica—common house flies ...	146 collections
Lucillia Caesar—green bottles	3 collections
Phlebotomus papatasii—sand flies	3 collections
Periplaneta orientalis—cockroach	1 collection
Culex fatigans	1 collection
Culex sitiens	1 collection

New Launch

220. In May 1958 a fast and manœuvrable launch, the *Sudong,* was put into commission. The Port Health Service now has two launches available for the inspection and clearance of ships and this facilitates expeditious clearance.

Inspection and Clearance of Small Craft

221. There is further improvement in the arrangements for health clearance for small craft from neighbouring islands; this work is now done at all times that immigration clearance is done, including Sundays and holidays.

Radiomedical Service

222. The Government operates a round-the-clock radiomedical service. This is often availed of by merchant ships and requests for radiomedical advice has been received from Masters of ships as far away as Persian Gulf and the Philippine Sea. During 1950 over 50 radiomedical requests were received and promptly attended to by the Port Health Officer on duty.

TABLE 38

SUMMARY OF WORK DONE BY THE PORT HEALTH SERVICE

	1954	1955	1956	1957	1958
INSPECTIONS AND CLEARANCE OF SHIPS					
Ships inspected and cleared ..	1,587	1,783	1,849	1,519	2,030
Passengers inspected on ships at the Quarantine Anchorage	98,994	116,275	95,779	101,182	136,226
Corpses inspected	4	14	14	10	11
Pilgrim Ships	5	3	4	4	4
Pilgrims	1,537	2,619	2,518	2,214	1,891
Disinfection of infected vessels ..	1	Nil	Nil	Nil	Nil
Small Crafts from neighbouring islands inspected and cleared	1,926	3,871	4,788	4,821	6,750
Passengers from small craft inspected ..	12,836	22,324	23,611	35,129	55,735
Inspection of Bum Boats	101	106	103	102	98
Inspection of Water Boats	8	6	8	8	9
RODENT CONTROL					
Ships inspected for evidence of rodent life	378	399	401	418	472
Ships issued with Deratization Certificate	117	104	119	109	119
Ships issued with Deratization Exemption Certificate	261	295	282	309	353
Rats destroyed during fumigation ..	1,083	1,192	782	462	1,170
Rats examined bacteriologically* ..	183	191	193	129	680
VACCINATION AND INOCULATION					
Small-pox vaccination	10,351	10,157	10,042	9,819	8,668
Cholera inoculation	10,560	10,277	10,051	10,321	10,838
T.A.B. inoculation	38	52	58	75	34
SANITARY DOCUMENTS					
Bills of Health	3,836	598	500	575	616
Permits issued to import, export or tranship coffins containing human remains	45	81	88	71	54
Certificates to accompany goods ..	127	118	93	94	175
Certificates issued for articles disinfected by steam	2	1	..	..	..

* Rats are examined bacteriologically by the City Health Department.

Quarantine Station

223. With stricter immigration control being enforced there continues to be a marked drop in the number of passengers quarantined at the Quarantine Station at St. John's Island.

TABLE 39

PASSENGERS QUARANTINED AT ST. JOHN'S ISLAND

———	Total	Chinese	Indians	Malaysians	Others
1954	16,034	7,400	8,175	21	438
1955	20,537	9,965	10,469	54	49
1956	33,842	22,260	11,424	109	49
1957	24,175	14,965	9,015	140	55
1958	14,421	7,648	6,429	323	21

Airport Health Service

224. Paya Lebar Airport is the International Airport for Singapore. The Airport is a designated Sanitary Airport under the terms of Article 19 of the International Sanitary Regulations. Seventeen international airlines make use of the Paya Lebar Airport and there were 4,067 scheduled aircraft arrivals and 4,092 departures on international flights. Round-the-clock service for the clearance of aircraft and passengers from 'infected airports' has been provided by four senior Hospital Assistants.

225. The general sanitation of the Airport has remained satisfactory throughout the year.

226. The Airport Health Officer rendered medical attention to minor ailments or emergencies. During the year 444 minor cases were seen; of these 18 were referred to General Hospital for treatment.

TABLE 40

SUMMARY OF WORK DONE BY THE AIRPORT HEALTH SERVICE

———	1952	1953	1954	1955	1956	1957	1958
Aircraft from infected airports ..	1,230	1,321	1,341	1,313	1,647	1,707	2,438
Passengers and crew cleared	35,025	39,725	39,725	45,976	71,600	82,166	94,718
Passengers isolated ..	..	..	..	..	..	..	..
Passengers under surveillance ..	510	69	41	21	67	2,565	2,882
Aircraft disinfected ..	..	..	..	..	..	..	..

Future Developments

227. A major problem facing many international airports is the re-organisation of passenger handling facilities to handle jet aircraft services. The Comet IV has accommodation for 80 passengers and the Boeing 707 a capacity of 120 passengers. The stop-over in Singapore will only be 45 minutes. This problem is being studied in relation to the health clearance of passengers, especially transit passengers. The first jet service to Singapore will come into operation in April 1959.

Chapter Nine

SCHOOL HEALTH

228. The School Health Service is centrally administered in Singapore. At the end of 1958 there were 702 schools in the Colony; this excludes the miscellaneous schools (e.g. religious, commercial, sewing, etc.).

229. In 1958, 34 new schools were opened. There were 57,000 new entrants compared with 53,000 in 1957. The total school population is 295,481 compared with 260,444 in 1957 which is an increase of 35,037.

230. A classification of Government, Government Aided, and private schools, together with the enrolments for 1957 and 1958 is shown in Table 41.

Table 41

SUMMARY OF SCHOOLS AND SCHOOL POPULATION

Type of Schools	Number of Schools		Enrolment	
	1957	1958	1957	1958
Government Schools:				
(*a*) English	183	202	84,951	100,898
(*b*) Malay	65	66	13,312	14,240
(*c*) Chinese	9	11	3,647	4,648
Aided Schools:				
(*a*) English	62	66	32,136	33,791
(*b*) Chinese	233	233	110,329	122,830
(*c*) Malay	1	..	107	..
(*d*) Tamil	17	17	1,351	1,463
Non-aided Schools:				
(*a*) English	70	67	11,112	11,295
(*b*) Chinese	28	40	3,499	6,316
Total ..	668	702	260,444	295,481

49.4 per cent of all the pupils attended English Schools.
45.3 per cent of all the pupils attended Chinese Schools.
4.8 per cent of all the pupils attended Malay Schools.
0.5 per cent of all the pupils attended Tamil Schools.

TABLE 42

GEOGRAPHICAL DISTRIBUTION OF SCHOOLS

	City	*Rural*	*Islands*	*Total*
Government and Government Aided Schools	360	213	22	595
Private Schools	97	9	1	107

TABLE 43

DISTRIBUTION OF SCHOOL POPULATION

Government and Government Aided Schools	*Private Schools*	*Total*
277,870	17,611	295,481

Staff

231. At the end of 1958 the staff of the School Health Section consisted of one Health Officer-in-charge of Schools, six Health Officers, seven Lady Health Officers, one Matron, three Health Sisters, ten Health Nurses, four Assistant Health Nurses, two Assistant Nurses, one Senior Hospital Assistant, three Hospital Assistants, one Laboratory Assistant and one Public Health Inspector Schools. Dr. Lai Kuen Yee, L.M.S. (Singapore), D.P.H. (Malaya) was the Acting Health Officer-in-charge Schools.

232. The School Tuberculosis Section, consisting of two School Tuberculosis Officers and the B.C.G. Teams, was transferred to the charge of the A.D.M.S. (Tuberculosis) in 1958. This was considered necessary in order that all tuberculosis work, both curation and prevention were co-ordinated.

TABLE 44

SUMMARY OF SCHOOLS, SCHOOL POPULATION, CHILDREN EXAMINED AND HEALTH OFFICERS 1954–58

———	1954	1955	1956	1957	1958*
Registered Schools ..	585	595	624	668	702*
Students	184,148	204,154	235,079	260,444	295,481*
Students examined ..	46,943	63,424	69,644	80,991	74,058
Health Officers	8	12	13	11	13

233. Number of students examined in 1958 shows a drop because many School Health Officers were diverted to work in the anti-poliomyelitis campaign during the poliomyelitis epidemic that occurred towards the end of the year.

ROUTINE MEDICAL EXAMINATION

234. Medical examinations of children were carried out by the School Health Officers in Government and Government Aided Schools only. There

were no medical examinations undertaken in private schools although the children from these schools attended the school clinics which are open to all school children.

235. As a routine the Health Officers examined (*a*) new entrants, (*b*) primary and secondary school leavers and (*c*) defectives found at previous examinations. A child is examined therefore at least twice in his school career. These examinations are listed as 'New Entrants', 'Leavers' and 'Re-examinations' respectively. During the visit to a school the staff are encouraged to refer any children who were not due for routine periodic examination but whose physical or mental progress appeared to be below normal, for a medical check; these children have been listed as 'Others'.

236. An invitation to be present at the medical examination was issued to all parents of children in the Primary I classes; it is quite impossible to obtain an accurate history of past illnesses, previous inoculations, etc. from children aged 7–8 years, and it also affords an excellent opportunity for the Health Officers to advise the parents on hygiene and diet.

237. Out of a total of 595 Government and Government Aided schools, 528 were visited by either a Health Officer or a Lady Health Officer or both. The Health Officers examined the boys in 317 schools and the Lady Health Officers examined the girls in 496 schools. The total number of children examined were 74,058. It was considered particularly important to examine the new entrants in order to diagnose and treat defects as early as possible and, where time was limited, the Health Officers concentrated on this group. According to the Ministry of Education 57,000 children entered school for the first time in 1958; of these, 36,974 children were examined during the year by School Health Officers.

TABLE 45

CLASSIFICATION OF SCHOOLS INSPECTED BY SCHOOL HEALTH OFFICERS

Schools	*City*	*Rural*	*Islands*	*Total*
Government English ...	121	49	2	172
Aided English ...	54	12	—	66
Government Chinese ...	6	1	—	7
Aided Chinese ...	119	97	2	218
Malay	18	23	7	48
Tamil	10	7	—	17
Total ...	328	189	11	528

TABLE 46

CLASSIFICATION OF CHILDREN EXAMINED

Schools	*Boys*	*Girls*	*Total*
Government English ...	14,646	18,584	33,230
Aided English	2,962	5,345	8,307
Government Chinese ...	182	527	709
Aided Chinese	10,870	15,578	26,448
Malay	2,015	2,770	4,785
Tamil	130	449	579
Total ...	30,805	43,253	74,058

TABLE 47

CLASSIFICATION OF EXAMINATION DONE

	Boys	*Girls*	*Total*
New Entrants	16,878	20,096	36,974
School Leavers	9,660	8,963	18,623
Re-examinations ...	1,679	11,460	13,139
Others	2,588	2,734	5,322
Total ...	30,805	43,253	74,058

GENERAL HEALTH

238. On the whole, the general standard of health of the school population in Singapore is satisfactory. There is more under-nutrition among the new entrants than among school leavers. As the child grows older this condition tends to improve. The children in the vernacular schools are comparatively of poorer level of health. Anæmia and worm infestation is more common in the rural schools.

Defects found during Medical Examinations and Re-examination of Defectives

239. Dental Caries is exceedingly prevalent and it is estimated that about 90 per cent of new entrants are affected. The majority cannot afford private dental treatment, especially those from the rural areas. Such facilities provided by the Government School Dental Service is inadequate.

240. Skin infections, scabies, tinea, impetigo, eczema are the common skin infections found, while head louse infestation is still found among certain Indian and Malay children.

241. *Eyes.*—Conjunctivitis is the most common eye infection encountered. Trachoma is rare and when suspected is always referred to the Ophthalmic Surgeon at General Hospital for confirmation. Defective vision occurs more often in the older age groups. Children from poor families are recommended for free glasses which are paid for by the Ministry of Education.

242. *Ear, Nose and Throat.*—Only cases of enlarged tonsils with a history of repeated sore throats or where the general health could be improved with removal of focal point of sepsis, were referred to the E.N.T. Unit at the General Hospital. Sinus infection was not common. Infections of the middle ear were usually chronic. Eleven cases of deafness were reported.

243. *Organic Vascular Heart Disease.*—Mitral stenosis, auricular and ventricular septal defects, and patent ductus arteriosus are the most common heart defects found. In a number of cases of mitral stenosis, the children must have suffered from 'silent' rheumatic infection as a previous history of rheumatic fever was very difficult to obtain.

244. *Respiratory Infections.*—Infections, mainly bronchitis, were found more often among children living in the urban area where overcrowded living conditions and poor ventilation are common. Children with a history of chronic cough or whose general health was poor were mantoux tested and radiologically examined.

245. *Genito-urinary.*—A number of 'pin-point' phimosis were found and referred to the General Hospital for surgical treatment. Hydrocele and inguinal

hernia were the more common defects found among the boys, and all cases were referred to the Surgical Units, General Hospital, for opinion and where necessary, treatment.

246. Anæmia with less than 60 per cent hæmoglobin (Sahli) is rare. Cases of anæmia were found more in the rural areas where worm infestation is prevalent. A certain number were due to nutritional causes in both urban and rural areas.

247. *Worm Infestation.*—Inadequate sanitation, the use of night-soil as market-gardening manure and the fact that most school children go about bare-foot at home, account for the much higher incidence of worm infestation in the rural schools.

TABLE 48

INCIDENCE OF DEFECTS DETECTED IN ROUTINE SCHOOL MEDICAL EXAMINATION

(Figures for incidence of defects expressed as percentages)

		1954	1955	1956	1957	1958
Dental Caries	Boys	36.84	50.09	51.67	46.16	45.91
	Girls	45.88	54.83	51.78	55.52	49.7
Skin Infection	Boys	9.18	8.72	7.51	10.74	13.63
	Girls	35.72	41.3	22.08	18.11	12.79
Eyes: Infection	Boys	2.75	2.26	1.73	1.36	1.81
	Girls	2.27	1.5	1.03	1.42	1.18
Defection vision ..	Boys	4.30	3.09	3.46	3.31	4.1
	Girls	8.19	3.6	2.54	4.13	6.42
E.N.T.: Enlarged tonsils ..	Boys	4.55	4.16	4.21	2.99	2.11
	Girls	1.94	0.93	0.75	1%	.46
Ear infections ..	Boys	0.24	0.45	0.67	.51	.64
	Girls	0.15	0.19	0.29	.25	.25
Cardiac Disease ..	Boys	0.13	0.16	0.34	.89	1.16
	Girls	0.74	1.46	0.82	1.14	1.18
Respiratory Infection ..	Boys	0.93	2.17	2.92	3.93	4.02
	Girls	8.48	10.87	6.62	4.48	3.62
Genito-Urinary ..	Boys	1.9	2.13	2.33	3.41	2.71
	Girls	0.09	0.14	0.08	.25	.33
Anæmia (under 60% Hb.) ..	Boys	1.6	1.36	1.61	.65	.71
	Girls	2.41	3.5	4.31	3.64	.69
Worm Infestation ..	Boys	2.1	6.42	8.84	8.34	2.8
	Girls	19.45	28.63	22.64	19.33	17.47
Other abnormalities including postural defects, Cleft Palate, Chest deformities ..	Boys	0.2	0.56	0.68	1.17	1.19
	Girls	8.21	9.42	8.55	18.09	8.88
Children Examined ..	Boys	21,674	36,232	37,553	41,221	30,805
	Girls	25,269	27,192	32,091	39,770	43,253

Personal Hygiene

248. There has been some improvement in general cleanliness among school children. School Health Officers have been able to get the co-operation of teachers in most cases to improve the hygiene habits of the children. More attention, however, should still be paid to the care of teeth and finger nails, and the wearing of shoes in the rural schools.

SCHOOL GENERAL CLINICS

249. The main School Health Clinic originally functioning at North Canal Road, moved into its new premises at the Institute of Health at Outram Road in April 1958. The School Tuberculosis Service, School Dental Service, and the School Health Administrative Centre also occupy the same building. Three subsidiary clinics are in the outer urban and rural areas and they function on certain afternoons only.

TABLE 49

ATTENDANCES AT SCHOOL CLINICS

	1954	*1955*	*1956*	*1957*	*1958*
Number of new cases ...	19,266	29.283	39,012	45,524	44,469
Number of re-visits ...	29,148	40,804	50,337	56,793	50,637
Total ...	48,414	70,087	89,349	102,317	95,106

250. The School Health Officers each have a regular morning and afternoon session at the main clinic in order to follow up their own cases. In the subsidiary clinics the Health Officers responsible for the schools in the area served by the particular clinic are in attendance at each clinic session.

Institute of Health Clinic

251. The main School Clinic is situated on the ground floor of the Government Wing of the Institute of Health, and comprise of a reception hall, waiting rooms, dispensary, laboratory, minor treatmen room, Sister's room, and three doctors' examination rooms.

Paya Lebar Clinic

252. Two afternoon sessions per week were held at the Paya Lebar Outdoor Dispensary in Upper Serangoon Road. This clinic catered for school children in the northern and central part of the Island and was well attended.

Kallang Clinic

253. One afternoon session a week was held at the Kallang Outdoor Dispensary. This replaced the clinic formerly held at the Telok Kurau English School, and catered for children in the crowded Geylang area. Two doctors were in attendance at each session.

Bukit Timah Clinic

254. One weekly session was held at the Bukit Timah Outdoor Dispensary with two doctors in attendance.

Laboratory Investigation

255. The Laboratory at the main clinic was equipped for simple routine examination of stool, blood, etc. 5,138 investigations were done in 1958.

School Travelling Dispensaries

256. One more School Travelling Dispensary was added towards the end of 1958 making a total of two mobile dispensaries visiting rural schools for treatment of minor ailments and for follow up of cases referred by School Health Officers; they also vaccinated new entrants in both rural and city schools. Each dispensary was in charge of a Health Sister. 435 visits were made to schools and 17,612 treatments were given.

Cases referred from School Clinics

257. 1,374 cases were referred to specialists and 5,850 cases were referred to various institutions.

INFECTIOUS DISEASES

258. Infectious diseases in school children were reported to the School Health Service by the City Health Officer, Rural Health Officer, General Practitioners and by Principals of Schools. Cases were detected during visits of children to clinics or by school nurses visiting homes of absent children. The number of cases of infectious diseases reported among school children during the last five years is shown in the following table.

TABLE 50

INFECTIOUS DISEASES IN SCHOOLS

	1954	*1955*	*1956*	*1957*	*1958*
Chickenpox	683	1,567	726	376	202
Diphtheria	68	43	61	118	124
Dysentery	4	2	18	—	6
Leprosy	18	13	7	4	4
Malaria	6	—	1	—	1
Measles	433	335	349	265	140
Mumps	488	588	306	218	207
Poliomyelitis	4	2	—	1	14
Typhoid fever	13	3	2	4	6
Whooping cough	4	35	11	28	34

259. During the epidemic of poliomyelitis in the latter part of 1958 14 cases occurred among school children.

260. In the poliomyelitis vaccination campaign in November to December 1958, all the male School Health Officers were diverted to this emergency work together with the majority of the ancillary clerical and nursing personnel.

Home and School Visiting

261. Homes and schools were visited by the Health nurses of the travelling dispensaries and the Institute of Health School Clinic—

(1) to investigate and follow up cases of tuberculosis.

(2) to investigate cases of infectious diseases reported by the City Health Officer, the Rural Health Officer, and by School Principals.

(3) to take throat swabs of all indirect class contacts of cases of diptheria reported by the City Health Officer and the Rural Health Officer. (4,504 throat swabs were taken in 1958 as compared with 3,952 in 1957).

(4) to vaccinate new entrants (29,175 new entrants were vaccinated in 1958, and 34,130 in 1957).

ENVIRONMENTAL HYGIENE IN SCHOOLS

262. Further progress was made in the field of environmental hygiene and sanitation of schools during 1958.

263. It is gratifying to note that the recommendations of the Ministry of Health are being readily accepted and promptly implemented by most of the schools.

Inspection of Schools

264. Inspection of schools carried out in the Colony may be classified into two main groups:

(i) routine school inspection;

(ii) special inspection.

265. The first type is confined to yearly inspection of existing schools for the purpose of ascertaining whether the provisions of the Schools Ordinance and Regulations made thereunder are being complied with. The second type embraces all other inspections arising from complaints, nuisances, new schools applying for registration, proposed new schools, additions and alterations to existing schools, etc.

266. 632 sanitary inspections were made in 1958, and 521 reports were transmitted to the Ministry of Education, other relevant departments and to Principals of Schools.

Building Plans

267. 68 building plans for proposed new schools were received. Site inspections were made in all cases; 47 plans were recommended, 3 were disapproved, while 18 are still under consideration.

Overcrowding

268. Overcrowding in the smaller schools still exist particularly in the vernacular schools.

Accommodation Certificates

269. After the necessary inspection, 256 Certificates of Accommodation were issued for new classrooms and as replacement for lost certificates.

Registration of New Schools

270. Eighteen applications for registration were received; of these six were recommended, six are under consideration, while the rest were not recommended.

Food Hygiene

271. Regular inspection of school canteens was carried out to ensure that the food was wholesome and prepared in a hygienic manner. In 1958 more than a dozen schools have been asked to provide proper canteens.

272. Improvement in canteen arrangements has been observed, particularly in the larger schools. Additional washing facilities have been installed, the tables have been lined with aluminium tops and fly-proof covers have been provided for the protection of food in many schools.

School Milk Scheme

273. The Social Welfare Department continued to distribute skimmed milk powder to undernourished children in schools. 42,372 lb. were distributed

in 1958; 13,284 children were recommended by the Health Officers for free milk. More Principals have shown interest in the scheme. It was considered that only those Principals who were sufficiently interested to see that the children were given the milk daily should participate in the scheme.

New Building

274. The Institute of Health was completed and was opened on the 14th May, 1958, by the Honourable Mr. A. J. Braga, Minister for Health. In April the main School Health Clinic previously situated in very cramped premises in North Canal Road moved into the Institute together with the main administrative offices originally at Maxwell Road.

SCHOOL HEALTH SERVICE

275. The school population increased in 1958 to 295,481 compared with 260,444 in 1957, an increase of 35,037. The number of new entrants was 57,000. 528 out of 595 Government or Government Aided schools were inspected. 74,058 students were examined, 36,974 of these being new entrants.

276. The general standard of health of the school population in Singapore is satisfactory. Attendances at school clinics for the treatment of minor ailments dropped by 6 per cent from 102,317 in 1957 to 95,106 in 1958; this is partly accounted for by the fact that the main clinic at the Institute of Health was closed during November and December for use as a Poliomyelitis Vaccination Centre.

Chapter Ten

DENTAL HEALTH

277. The Dental Section continued to consolidate the expansion of its work during 1958. The establishment was increased to 42 Dental Officers of which 35 have been filled. Mr. Wong Mook Qui, L.D.S., D.P.D. continued to act as the Chief Dental Officer throughout the year.

CLINICAL DENTISTRY

Schools Division

278. The school population is increasing every year and the problem of providing dental treatment to children of school-going age can only be met by increased staff and facilities. A feature of the expansion in this field was the opening of a large clinic at the Institute of Health in May. Plans too were submitted for the erection of two Dental Huts in the grounds of Tanjong Katong School to attend to the dental needs of the school population in the eastern part of the Island.

School Dental Clinic, Tan Tock Seng's Hospital

279. The School Dental Clinic at Tan Tock Seng's Hospital continued to give complete systematic treatment for selected groups of children and emergency treatment for all school children. The present building and site are not satisfactory and a site at Pegu Road might be available for a new clinic next year. This clinic provided treatment to inmates of certain Homes and Institutions during the school holidays.

School Dental Clinic, Institute of Health

280. This clinic occupies the fourth floor of the Government Wing of the Institute of Health. It is set up on modern lines with accommodation of five chairs in the General Surgery. In addition, it has a General Anæthetic Room, an Orthodontic Surgery with two chairs and a laboratory.

281. Apart from the routine treatment of school children, this clinic would provide specialised treatment in the field of orthodontics to all children referred from all the other school clinics. It is planned that all prosthetic work from the various school clinics would be carried out at this clinic. Four Dental Officers are attached to this clinic. The general treatment of school children is along the same lines as those of the main school clinic at Tan Tock Seng's Hospital.

Dental Huts

282. The dental huts staffed by dental nurses under the supervision of dental officers continued to operate at the following schools: Pearl's Hill School, McNair Road School, Rangoon Road School and Anthony Road School. Considerable conservative work was done at these huts. Work beyond the scope of treatment by dental nurses was attended to by dental officers.

Mobile Clinics

283. The three mobile clinics attended to 30 schools in the rural areas and continued to provide treatment both systematic and emergency to each school one session per week. The mobile clinics also visited institutions such as the School for the Blind, Boys Town, St. Andrew's Orthopædic Hospital, Children's Red Cross Hospital, etc. on Saturdays and during school holidays.

Clinics at Social Welfare Centres

284. These clinics continued to operate at three centres namely: Siglap Centre, Sims Avenue Centre and Bouna Vista Centre. Dental treatment was provided to under-privileged children attending classes in 15 Social Welfare Centres. Transport was provided or arranged by the Social Welfare Department to bring these children to the respective clinics for treatment. During the middle of the year, admission of new children was stopped by Social Welfare Department at all the centres. Arrangements were made as a temporary measure with the agreement of Social Welfare Department to treat children from Bedok School at the Siglap clinic. At Sims Avenue, the Dental Officer was put on a part-time basis and he was detailed to work at Royal Malayan Navy at other times. At Bouna Vista, the patients attending the Maternity and Child Welfare Centre in the same compound were covered by the clinic.

Christmas Island

285. Dental treatment was given to school children living on Christmas Island this year during the period May/June only. This service was terminated in the latter half of the year when Australia formally took over the administration of the island.

HOSPITALS DIVISION

286. The Dental Clinic at General Hospital is the only out-patient dental clinic attending mainly to the needs of the poorer sectors of the population in the whole of Singapore.

287. The Dental Clinic at General Hospital has been an out-patient clinic as well as a teaching centre since its inception. During the year the clinic was staffed by seven Government Dental Officers and one Houseman in conjunction with the University staff of twelve. The major bulk of the routine work was done by the Government staff while the more specialised cases plus suitably selected cases for teaching purposes were attended to by University staff and students. Mention must also be made of the fact that four Dental Officers assisted in University teaching in addition to their clinical duties. In particular, one Dental Officer was engaged full time both in teaching and in assisting the Professor of Dental Surgery in administrative work.

288. This year there has been a decrease in the total number of out-patients visits to this clinic, 87,293 as against 107,700 last year. This was caused by the sharp decrease in the number of dental officers and housemen and by the fact that the admissions to the clinic had to be restricted during the recent poliomyelitis epidemic. As a result of the latter following a directive from the Ministry of Health there was a considerable decrease in the number of children admitted. With adults the total number of new cases, the number of repeats and extractions has also decreased. There has, however, been some increase in certain types of Conservative Dentistry which formed part of the students requirements.

Chronic Sick

289. Dental treatment for the inmates of Trafalgar Home, Woodbridge Hospital, and Tan Tock Seng's Hospital were attended to by one Dental Officer who continued to divide his time between the three Institutions.

Maternity and Child Health Division

290. An addition of one more clinic was effected this year with the opening of a dental clinic at Prinsep Street in January. This new clinic was the first one established in the city areas and was accommodated in the Maternity and Child Welfare Clinic run by the Singapore City Council.

291. Nursing mothers and pre-school children at the other existing clinics, namely Mandai, Bukit Timah, Yio Chu Kang, Ama Keng, Kampong Batak continued to receive full dental treatment.

MISCELLANEOUS DENTAL CARE

Police Dental Clinic

292. During the year a majority of the Police Force were rendered dentally fit by the Dental Officer attached to this clinic. Periodical check-ups were carried out from time to time to ensure dental fitness. Recruits at Police Training School were examined for dental fitness before being accepted into the Force. Considerable replacement for loss of teeth was provided resulting in the issue of 144 dentures. Lectures on dental health were delivered to the force at quarterly intervals at the Police Training School and these have a marked effect on the attitude of the force as a whole towards better oral hygiene.

293. Once a week, the Dental Officer attached to the clinic visited Changi Prison to provide treatment for the relief of pain and other emergencies.

Dental Clinic, Royal Malayan Navy

294. During the year the majority of the Force were rendered dentally fit. In the latter half of the year, work was confined mainly to treatment of new recruits and emergencies with periodical check-ups.

Dental Treatment at St. John's Island

295. A dental service once a week came into effect in January this year providing treatment on the spot to inmates of the Opium Treatment Centre. This saves time and inconvenience as previously inmates were being brought to General Hospital under escort whenever dental treatment was required.

PREVENTIVE DENTISTRY

Fluoridation Scheme

296. In connection with the fluoridation scheme, a fourth annual dental survey of school children was carried out in Singapore and Malacca soon after the start of the school year. This series of annual surveys are essential for assessing the efficacy of the fluoridation scheme and they should produce much valuable information in addition.

297. In the study undertaken in connection with the Singapore fluoridation programme, two age groups only are dealt with, that is children aged 7 years to 7 years 11 months and children aged 8 years and 8 years 11 months. It is anticipated that after 6 years of fluoridation, there will be a reduction

in dental caries experience of about 45 per cent in the age groups of 7 years to 7 years and 11 months and a reduction of about 40 per cent in the age group of 8 years to 8 years and 11 months by comparison with the base line caries rate of these two age groups in the city. Such reductions are expected on the basis of the results which have been achieved already by similar fluoridation projects elsewhere notably the Grand Rapids project in the United States and the Brantford project in Canada. It is not unreasonable to expect that after a sufficiently long period of fluoridation, Singapore will obtain results largely similar to those which have been achieved so far by the projects at Brantford and Grand Rapids. It is possible that in the course of time, the beneficial effect of fluoridation will be felt not only among the children but among adults up to the age of about 45 years.

Dental Health Education

298. The Dental Section continued to distribute a number of posters and pamphlets to schools, Maternity and Child Welfare Centres, Children Social Welfare Centres and dental clinics. Talks on oral hygiene were delivered by dental nurses at the schools where they are stationed. The Police Dental Officer gave quarterly lectures with demonstrations and films to Rank and File of the Singapore Police Force at the Police Training School. At the new school clinic at the Institute of Health, simple nursery rhymes with dental implications plus short talks on oral hygiene with instructions on brushing the teeth were tape recorded and played regularly to an audience of school children attending the clinic.

DENTAL BOARD

299. The Inspecting Officer, Dental Board reports as follows:

The total number of routine inspections carried out in 1958 on Division II Dentists was 482. Twelve warning notices were issued for Suspected Covering (4), No name-plate (2), Wrong Vocation in name-plates (4) and Wrong Vocation in Signboards (2).

During 1958 a number of Division II Dentists bought Japanese made dental units to replace their old clumsy foot-engines. Many realised the importance of cleanliness, and had taken advice not to display instruments on trays until they were actually required.

During the year 1958 there were 11 new registrations and 3 removals of Division I Dentists. This resulted an overall increase of 8 Division I Dentists in the Register. During the year 1958 there were one death, one new registration and two restorations among Division II Dentists.

TABLE 51

DENTISTS IN SINGAPORE, 1958

Division I	*Beginning of 1958*	*End of 1958*
Private Practice	35	42
Government Service	36	35
University of Malaya ...	12	13
	83	90
Division II		
Private Practice	239	241

TABLE 52

DENTAL SERVICES, SINGAPORE

RETURN OF WORK 1958

	PATIENTS SEEN					TREATMENT GIVEN									PATIENTS
	NEW CASES			Re-examined	Total attendances	FILLINGS			EXTRACTIONS		Scalings (per visit)	Dressings (per visit)	Dentures inserted)	Other treatment	Treatment completed
	Examined	Requiring treatment	Refusing treatment			Silver Amalgam	Silicate	Other	Deciduous teeth	Permanent teeth					
SCHOOLS DIVISION:															
School Dental Clinic, T.T.S.H. ..	5,548	5,251	409	1,131	28,032	10,955	2,718	13	9,782	4,953	1,065	7,061	63	2,174	894
S.D.C., Institute of Health ..	708	673	19	3	6,233	3,179	369	65	2,311	816	261	1,354	2	372	146
Dental Nurses Clinics	1,159	604	292	1,515	9,293	4,263	1,428	134	1,759	795	1,917	2,287	13	1,017	411
Mobile Dental Clinics ..	1,917	1,784	345	1,898	11,513	7,738	738	1,586	5,491	1,200	252	2,152	4	157	475
Sims Avenue Community Centre ..	399	399	..	2,005	2,404	1,072	110	9	998	220	57	509	9	132	210
Siglap Social Welfare Centre ..	511	475	32	100	3,793	1,121	239	68	2,602	514	61	1,131	5	..	102
Buona Vista Community Centre ..	351	351	142	88	3,086	724	88	13	1,055	837	62	125	26	290	46
HOSPITALS DIVISION:															
Dental Clinic, General Hospital ..	25,770	..	..	61,523	113,063	2,956	601	1,820	27,700	26,001	..	23,315	2,025	2,373	..
Dental Officer, Chronic Sick ..	869	869	60	4,640	5,449	535	199	257	99	3,463	156	139	102	237	348
MATERNITY AND CHILD WELFARE DIVISION:															
Bukit Timah and Ama Keng ..	1,173	1,173	..	..	5,880	1,057	231	5	920	4,859	180	1,016	268	598	205
Mandai and Yio Chu Kang ..	996	996	49	34	4,286	249	49	181	1,434	3,090	69	145	104	..	52
Kampong Batak	1,140	1,140	38	4,586	5,688	1,430	326	3	607	4,328	415	620	103	615	394
Prinsep Street	506	506	..	..	2,161	438	207	26	98	1,255	253	539	33	311	51
MISCELLANEOUS:															
Police Dental Clinic	418	406	38	309	4,077	1,374	153	30	..	1,253	404	572	144	856	110
Royal Malayan Navy	86	86	..	493	1,861	541	152	27	20	162	453	177	35	277	346
St. John's Island	300	294	..	110	500	..	..	..	..	960	5	20	..	45	180
Total ..	41,851	15,007	1,424	78,435	207,319	37,632	7,608	4,237	54,876	54,706	5,610	41,162	2,936	9,454	3,970

Chapter Eleven

HEALTH EDUCATION

300. The Health Education Section performs two functions which are closely related. It serves the Health Branch of the Ministry of Health and is also the executive arm of the Singapore Health Education Council.

Staff

301. The staff of this Section are the Health Education Officer, two Health Education Assistants and one Technician. Mrs. M. Knight, DIP. SC., B.S.C. (Hon.) was in charge of the Section.

World Health Day, 1958

302. The World Health Day celebrations have now become part of our annual time table. This year a Special Committee convened by the Director of Medical Services was responsible for exhibitions held throughout the island on the theme "Ten Years of Health Progress". The management of these exhibitions was a major task and gave considerable opportunity to develop this medium of health education. Exhibitions were held at nine centres and it is estimated that at least 50,000 persons attended the Exhibitions.

Exhibitions

303.

1.	World Health Day—Theme: Ten Years of Health Progress	9 exhibitions in community centres.
2.	Anti-Spitting	1 stall in City Council Exhibition.
3.	Anti-Litter Theme: The authorities and you can co-operate	1 stall in City Council Exhibition.
4.	Anti-Pest Theme: Protect your home	1 stall in City Council Exhibition.
5.	Our Singapore	2 panels. Ministry of Health.

Teacher-Training Programme

304. One of the long-term projects inaugurated during the year which was successful was the course of lectures sponsored by the Singapore Health Education Council. These were lectures on various aspects of health related to school children for teachers in Government schools. The Ministry of Education co-operated to make it a success and the enthusiasm and the standard of lectures from the expert panel of lecturers was encouraging.

Lectures for Teachers

305.

1.	The Organisation of the Medical Services ...	Dr. M. Doraisingham.
2.	Normal and abnormal rates of growth and development. Inheritance	Dr. W. Danaraj.
3.	Controlling the spread of infectious Diseases	Dr. K. Kanagaratnam.
4.	Immunity and Immunisation	Dr. Leong Kwok Wah.
5.	Dental Health	Mr. Wong Mook Qui.
6.	Nutrition	Dr. J. Millis.
7.	Helping teachers to handle problem Children	Mrs B. Kinna.
8.	The role of the phychologist in helping teachers with their children	Mr. V. W. Wilson.
9.	The Medical Social Services	Miss D. K. Vaithilingam.
10.	Accidents	Dr. C. Marcus.
11.	Tuberculosis	Dr. C. E. Smith.
12.	Principles and Methods of Health Education	Mrs. M. Knight.

Papers in 'Young Malayans'

306. Throughout the year a steady flow of articles was maintained in the *Young Malayans*, a bi-monthly paper for school children. This experience was of value in selecting material of interest and value for school children.

307. Production of health education materials, particularly posters and pamphlets still engage the attention of the Section.

Posters Prepared

308. 1. Seven basic food groups. (Nutrition).
2. Complete welfare service. (Maternal and Child health).
3. Save a life. (Blood Transfusion).
4. Break this vicious circle. (Worm infestation).
5. Leprosy can be cured.

Models Produced

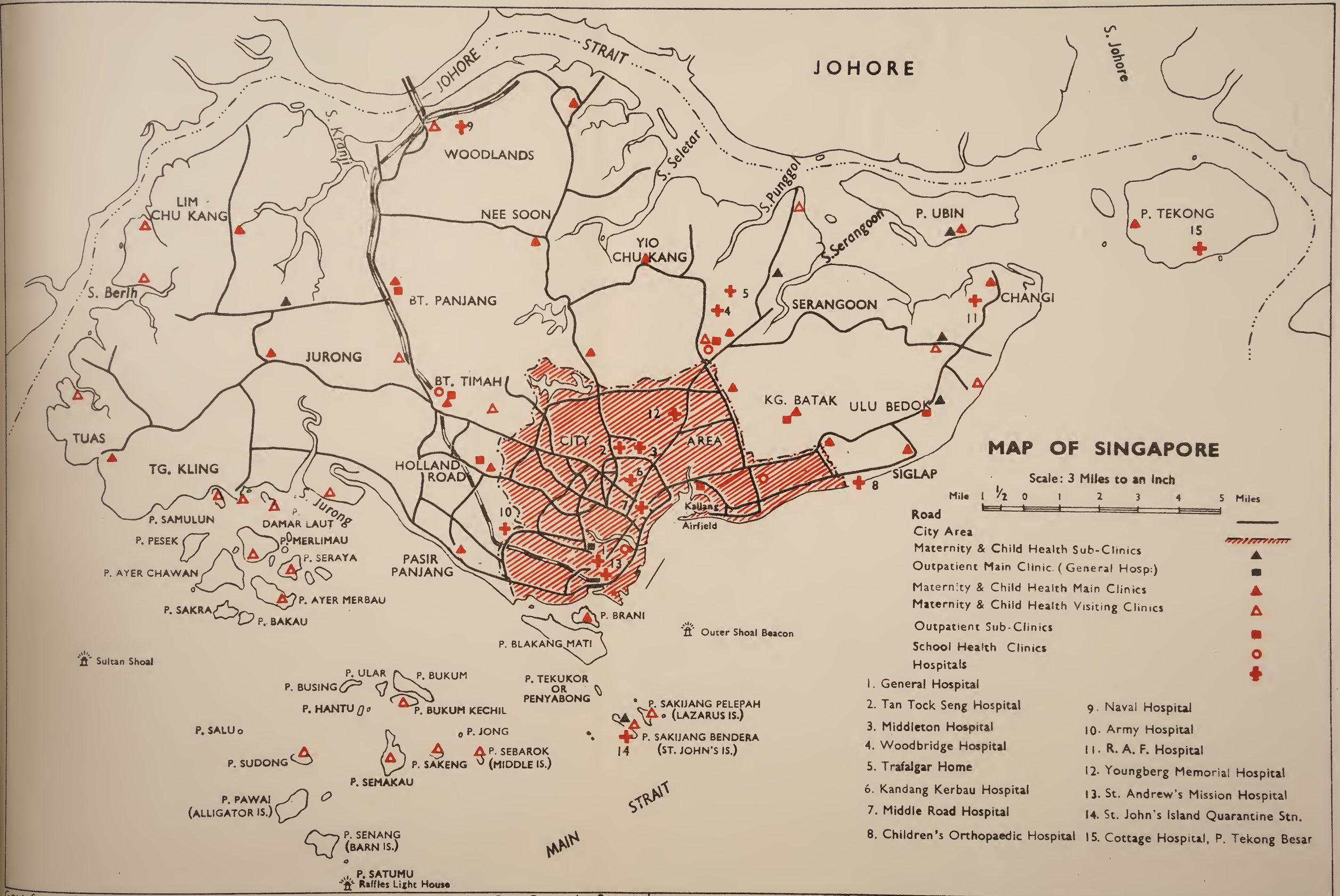
309. 1. A typical Maternal and Child Health clinic.
2. St. John's Island showing lay out of quarantine services.
3. Institute of Health.

Health Education Council

310. Sir Percy McNeice, O.B.E., was elected Chairman and Dr. C.E. Smith, O.B.E., Vice-Chairman of the Council for the year 1958-59.

Teaching

311. The Health Education Officer gave formal lectures to five post-graduate D.P.H. students, 12 student nurses and 31 Public Health Inspectors.



MAP OF SINGAPORE

Scale: 3 Miles to an Inch

Mile 1 ½ 0 1 2 3 4 5 Miles

Road	
City Area	
Maternity & Child Health Sub-Clinics	▲
Outpatient Main Clinic. (General Hosp:)	■
Maternity & Child Health Main Clinics	▲
Maternity & Child Health Visiting Clinics	△
Outpatient Sub-Clinics	■
School Health Clinics	○
Hospitals	✚

1. General Hospital
2. Tan Tock Seng Hospital
3. Middleton Hospital
4. Woodbridge Hospital
5. Trafalgar Home
6. Kandang Kerbau Hospital
7. Middle Road Hospital
8. Children's Orthopaedic Hospital
9. Naval Hospital
10. Army Hospital
11. R. A. F. Hospital
12. Youngberg Memorial Hospital
13. St. Andrew's Mission Hospital
14. St. John's Island Quarantine Stn.
15. Cottage Hospital, P. Tekong Besar

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PART III

THE HOSPITALS DIVISION

Chapter Twelve

THE HOSPITALS DIVISION

PHYSICAL DEVELOPMENT

312. The expansion of the hospital and curator services showed further progress in 1958.

313. At the General Hospital the Division of Physiotherapy was completed incorporating the most modern methods of physical therapy. It occupies three floors of the rear wing of Stanley Block. Work commenced during the year, and was fairly well near completion at the end of the year, of the Burns Unit for the Department of Orthopædic and Traumatic Surgery. The new Sisters' Quarters which will accommodate six matrons and 72 nursing sisters was completed in December. The Housemen's Flats, consisting of 60 units, was also under construction at General Hospital.

314. At Kandang Kerbau Hospital the construction of the Central Service Block and the work on the modernisation of the old blocks into Gynæcological Units was in progress.

315. Two further modern wards blocks were completed at Tan Tock Seng's Hospital.

316. The Mental Defective Home was under construction at Woodbridge Hospital.

317. Two standard type out-patient dispensaries were completed during the year at Pegu Road and Bukit Panjang.

318. The construction of the Hospital for Chronic Sick commenced in May 1958 and is expected to be ready by the middle of 1959. It will accommodate 400 persons and relieve the acute hospitals of valuable beds.

319. The new Institute of Pathology was completed and occupied in May 1958. It houses the Government Bacteriology and Pathology Units and the University Department of Pathology.

320. During the course of the year the beds available in Government Hospitals in Singapore increased from 6,134 beds to 6,529 beds, an increase of 395 beds.

321. Although this figure is encouraging, it is still short of the needs of Singapore.

322. The steady increase in the number of patients treated in all Singapore hospitals which has been recorded every year has been maintained. Table 53 shows the total number treated in the four main hospitals. (General Hospital, Kandang Kerbau, Tan Tock Seng and Middle Road) over the past years.

TABLE 53

PATIENT ATTENDANCES AT MAIN HOSPITALS, SINGAPORE

Year	*In-Patients*	*Out-Patients*
1938	25,913	87,447
1947	27.514	305,138
1948	27,367	332,427
1949	32,998	380,599
1950	40,164	433,420
1951	40,833	612,095
1952	48,550	726,310
1953	55.420	957,481
1954	58,859	1,169,689
1955	62,024	1,271,165
1956	67,023	1,597.930
1957	75,253	1,980,929
1958	81,698	2,162,274

323. If these figures are examined in conjunction with the graphs, on pages 91 and 92, it will be seen that the increase of patients was progressively increasing.

324. Table 54 indicates the number of beds available at various Government hospitals.

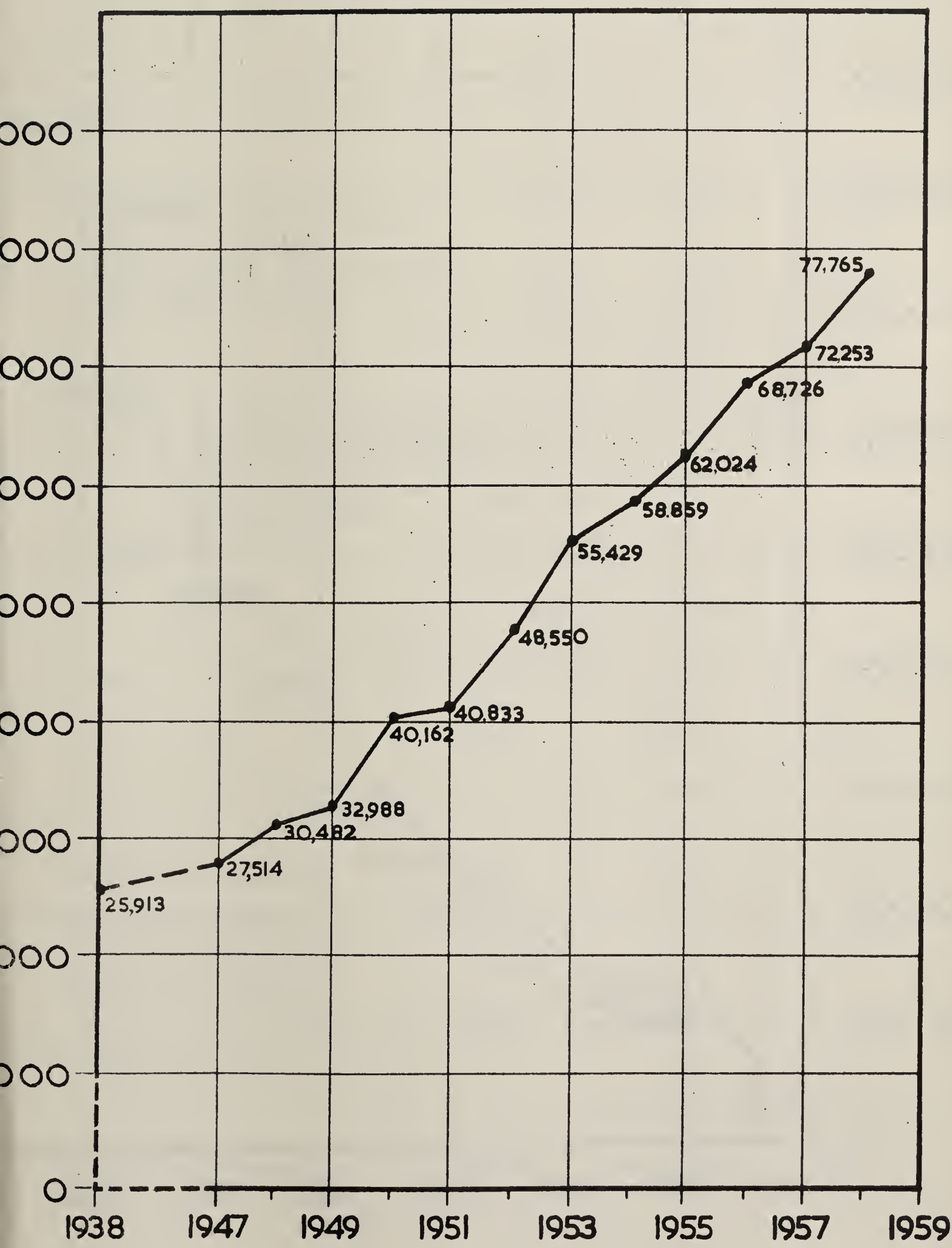
TABLE 54

BEDS AVAILABLE AT VARIOUS GOVERNMENT HOSPITALS

——	Pre-war	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
General ..	750	550	550	600	700	700	750	800	800	800	957	1,205	1,182	1,191
Kandang Kerbau (excluding cots) ..	180	200	220	240	240	240	240	240	240	240	316	316	316	316
Tan Tock Seng	600	400	400	550	572	600	540	565	565	564	564	972	938	1,142
Orthopædic ..	..	60	60	60	65	70	70	78	120	120	120	120	120	120
Prisons ..	140	50	50	118	118	140	140	160	160	160	160	160	160	160
Social Hygiene (excluding cots) ..	Part of General	60	60	60	68	70	70	70	70	60	65	65	65	65
Infectious Disease ..	250	250	250	250	250	250	250	250	250	200	200	250	250	250
Leprosy Settlement	200	260	347	382	451	536	640	725	790	642	954	973	973	1,023
PoliceTraining School ..	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mental ..	2,000	440	700	1,000	1,200	1,600	1,800	1,800	1,800	1,800	1,800	1,800	2,040	2,222
Opium Treatment Centre St. John's Island ..	..	..	..	..	..	..	..	..	..	..	..	20	20	20
Total ..	4,140	2,290	2,657	3,280	3,684	4,226	4,520	4,708	4,815	4,606	5,156	5,901	6,084	6,529

SINGAPORE MAIN HOSPITALS

TOTAL NUMBER OF IN-PATIENTS TREATED



SINGAPORE MAIN HOSPITALS

TOTAL NUMBER OF OUT-PATIENTS TREATED

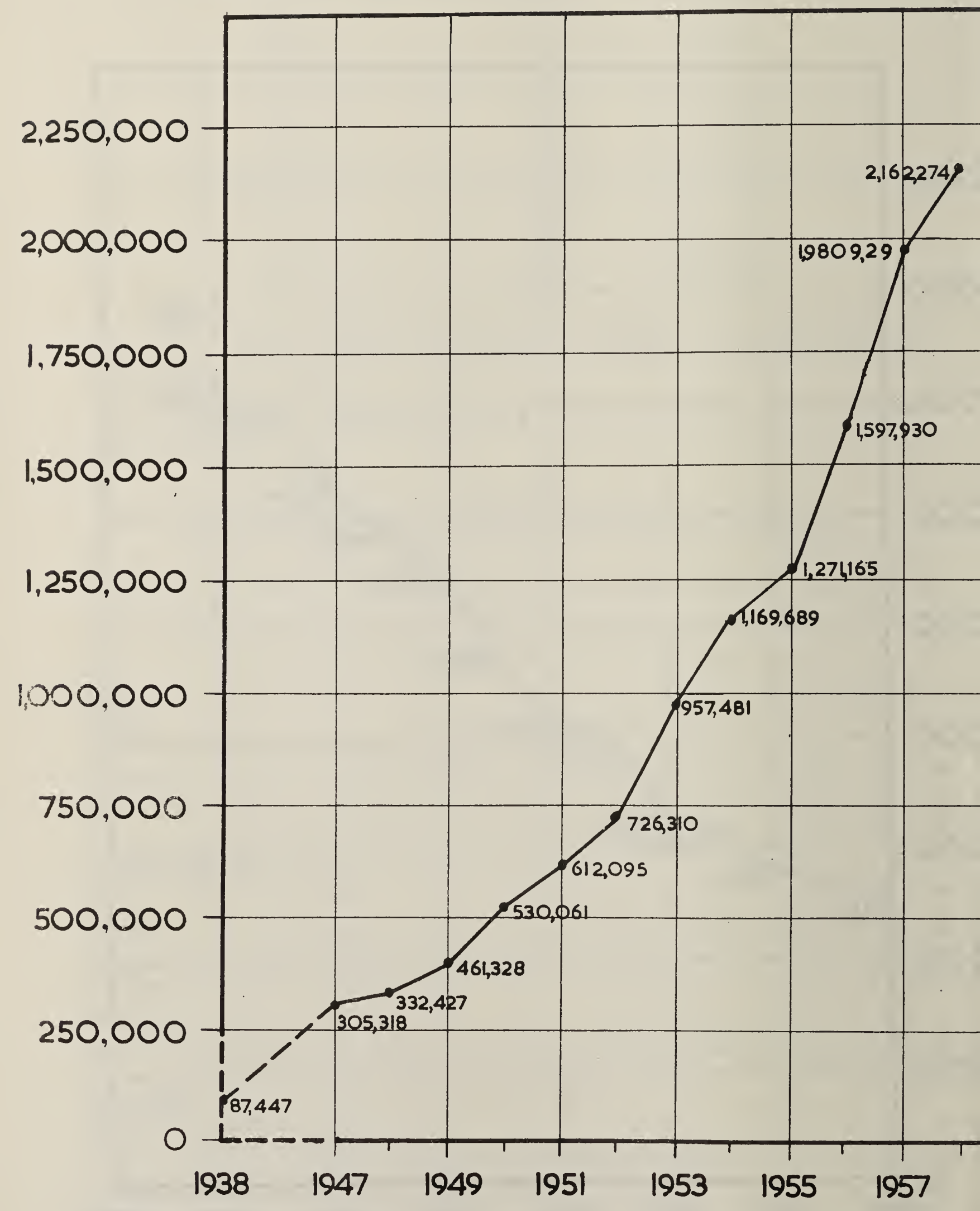


TABLE 55

MAIN HOSPITAL IN-PATIENTS ADMITTED AND TREATED DURING 1958

Hospitals	*Admissions*	*Total Treated*
General Hospital	35 893	36,852
Kandang Kerbau Maternity Hospital ...	39,480	39,761
Tan Tock Seng's Hospital	3,169	3,933
Social Hygiene Hospital	1,125	1,152
Total ...	79,667	81,698

TABLE 56

MAIN HOSPITAL OUT-PATIENT ATTENDANCES DURING, 1958

Hospitals	*New Cases*	*Repetitions*	*Total Attendances*
General Hospital	331,163	700,802	1,031,965
In addition, M.O. i/c. Officials ...	6,402	—	6,402
Dressings and Injections ...	—	291,947	291,947
Kandang Kerbau Maternity Hospital	84,232	159,388	243,620
Tan Tock Seng's Hospital ...	7,274	383,733	391,007
Social Hygiene Hospital ...	34,861	162,472	197,333
	463,932	1,698,342	2,162,274

325. The following institutions provide beds for the public:—

Kwong Wai Siu Free Hospital (Chinese).
St. Andrew's Mission Hospital.
Malayan Union Mission of Seventh-Day Adventists.
Hainanese Hospital.
Kheh Hospital.

TABLE 57

MAINTENANCE CHARGES AT GOVERNMENT HOSPITALS

(DAILY AVERAGE COST)

———	Paying Patients (*a*)	Paying Patients (*b*)	Free Patients
	$ *c.*	$ *c.*	$ *c.*
General Hospital: Maintenance (including diet) ..	29 19	27 52	26 25
Kandang Kerbau Hospital: Maintenance (including diet) ..	23 25	22 45	21 36
Tan Tock Seng's Hospital: Maintenance (including diet) ..	No Paying Patients	No Paying Patients	
Tuberculosis patients ..	..	..	14 61
Other patients	..	..	13 31
Social Hygiene Hospital: Maintenance (including diet) ..	No Paying Patients	No Paying Patients	14 89

TABLE 58

IN-PATIENT ADMISSIONS, 1958

Hospitals	*Paying*	*Free*	*Total*
General Hospital	3,668	32,225	35,893
Kandang Kerbau Hospital ...	2,900	36,580	39,480
Tan Tock Seng's Hospital	—	3,169	3,169
Social Hygiene Hospital	—	1,125	1,125
Middleton Hospital	—	3,679	3,679
St. Andrew's Orthopaedic Hospital ...	—	139	139
Total ...	6,568	76,917	83,485

326. Excluding mental and leprosy cases, out of the total number of in-patients admitted throughout the year 6,568 or 7.9 per cent were paying cases.

AMBULANCE SERVICE

327. The Ambulance Advisory Committee met as and when required to review the Colony's requirements in this field.

328. The number of ambulances in use at the various hospitals at the end of 1958 is given in Table 59.

TABLE 59

AMBULANCES IN SINGAPORE, 1958

General Hospital	7
Kandang Kerbau Hospital	4
Tan Tock Seng's Hospital	2
Middleton Hospital	2
Fire Brigade Accident Ambulance Service ...	6
Rural Board	1

Note:—Three ambulances were on order at the end of 1956.

TABLE 60

AMBULANCE SERVICE

Year	*Patients*	*Mileage Covered*
1953	5,725	68,368
1954	7,906	74,542
1955	10,105	102,688
1956	13,268	121,782
1957	16,371	147,539
1958	7,224	112,325

329. Dr. C. Marcus, L.M.S. (Singapore) was the Assistant Director of Medical Services (Hospitals) during the later part of 1958.

Chapter Thirteen

GENERAL HOSPITAL

330. Further progress in the expansion and development of the General Hospital was made in 1958. The conversion of one wing of Stanley Block into a three-floor Division of Physiotherapy was completed during the year. Incorporated into the planning and design are the most modern methods of physical therapy. The Division now integrates the various sections, previously functioning in different parts of the hospital, in one building and under one administrative control.

331. Ambulance garages were commenced in the latter part of 1957 and were completed in April this year.

332. The new Sisters' Quarters facing Kampong Bahru consisting of nine-storey flats for the accommodation of six matrons and 72 nursing sisters and ancillary staff was completed in December.

333. Work commenced on an extension of Ward 59 of the Orthopædic Department in March to provide accommodation for the specialised treatment of burns. The extension will provide 40 beds, of which 14 are for male, 11 for female and 15 for children. The Burns Unit will have its own operating theatre and other special facilities designed to meet the requirements in the modern treatment of burns. It is expected to be completed early in 1959.

334. In March work commenced for the erection of a seven-storey housemen's flats, which will contain 60 units for the housing of two housemen each.

Staff

335. The staff of the Hospital is given in Table 65. Dr. C. Marcus, L.M.S. was the Medical Superintendent for most part of the year. Others who carried out the duties of the Medical Superintendent at various times during the year were: Dr. L. M. Ram, M.B., B.S., M.R.C.P., D.P.H., Dr. Toh Chiong Hieng, L.M.S. and Dr. Ho Yuen, L.M.S., M.R.C.P.

336. Table 61 summarises the activities of the hospital and shows the progressive increase over the last eleven years. In-patient figures show an increase of 2,229 patients, which represents an increase of 6 per cent over the corresponding figures for 1957. Similarly, the increase of 91,033 out-patient attendances represents a 7 per cent increase over the previous year. The total number of deaths was 2,739 as compared to 2,585 in 1957. The percentage of deaths to the total number of cases treated was 7.43 as against 7.47 in the previous year.

337. The hospital is the main teaching hospital of the Faculty of Medicine of the University of Malaya.

338. During the year the average bed state was 1,000.39 as against 1,051.90 in the previous year. The bed strength fell from 1,205 to 1,191 as the result of the transfer of the Prison Ward, previously occupying Ward 36, to Ward G in the H.M. Prison at Outram Road to make room for the development of the Physiotherapy Department.

TABLE 61

BED STRENGTH AND PATIENT ATTENDANCES AT THE GENERAL HOSPITAL

Year	*Beds*	*In-Patients*	*Out-Patient Attendances*
1947	550	15,021	114,167
1948	600	14,683	138,801
1949	700	15,478	153,534
1950	700	17,886	162,524
1951	750	19,720	185,131
1952	800	22,753	358,769
1953	800	26,219	482,332
1954	800	27,404	615,588
1955	957	28,222	691,064
1956	1,205	32,324	881,742
1957	1,191	34,623	1,239,281
1958	1,191	36,852	1,330,314

TABLE 62

BREAKDOWN OF OUT-PATIENTS AT GENERAL HOSPITAL

Nationalities	NEW CASES			Total	REPETITIONS			Total
	Male	Female	Child		Male	Female	Child	
Europeans ..	1,381	763	466	2,610	3,564	2,997	765	7,326
Eurasians ..	1,561	1,190	924	3,675	3,323	3,687	1,967	8,977
Chinese ..	82,230	74,206	87,463	243,899	213,803	155,339	150,723	519,865
Indians ..	36,397	9,208	10,711	56,316	72,779	19,740	17,438	109,957
Malays ..	9,414	4,692	8,225	22,331	22,523	13,971	13,385	49,879
Javanese ..	283	76	52	411	347	66	66	479
Japanese ..	17	4	..	21	4	5	..	9
Others ..	1,085	458	357	1,900	1,901	1,263	1,146	4,310
Total ..	133,368	89,597	108,198	331,163	318,244	197,068	185,490	700,802

TABLE 63

GENERAL HOSPITAL, OUT-PATIENTS, 1958

	New Cases	*Repeats*	*Total*
Male Out-patient Department	46,272	84,975	131,247
Female Out-patient Department	97,477	95,001	192,478
Casualty Out-patient Department	62,819	19,032	81,851
Medical Officer i/c. Officials (Senior) ...	4,299	9,873	14,172
Medical Officer i/c. Officials (Junior) ...	5,675	19,684	25,359
Eye Clinic	19,311	70,904	90,215
Surgical O.P.D. "A" Unit	13,194	14,409	27,603
Surgical O.P.D. "B" Unit	11,330	25,535	36,865
Surgical O.P.D. "C" Unit	9,399	30,853	40 252
Ear, Nose and Throat Department	12,526	18,480	31,006
Medical O.P.D. Unit I	1,912	27,949	29,861
Medical O.P.D. Unit II	2,214	29,291	31,505
Pædiatric O.P.D.	2,055	28,592	30,647
Dental Clinic	25,770	61,523	87,293
Skin Clinic	6,630	9,767	16,397
Medical and Surgical Physiotherapy Department	9,681	136,781	146,462
Occupational Therapy	599	18,153	18,752
Total ...	331,163	700,802	1,031,965
In addition M.O. i/c. Officials	6 402	—	6 402
In addition Dressings and Injections O.P.D. ...	—	291,947	291,947

In addition M.O. i/c. Officials

	Senior	*Junior*
Recruits	1,114	3,028
Medical Boards	83	—
Inoculation and Vaccinations	2,158	19
Total ...	3,355	3,047

Monthly average Out-patients

New Cases	28,130.42
Repeats	82,729.08
Total ...	110,859.50

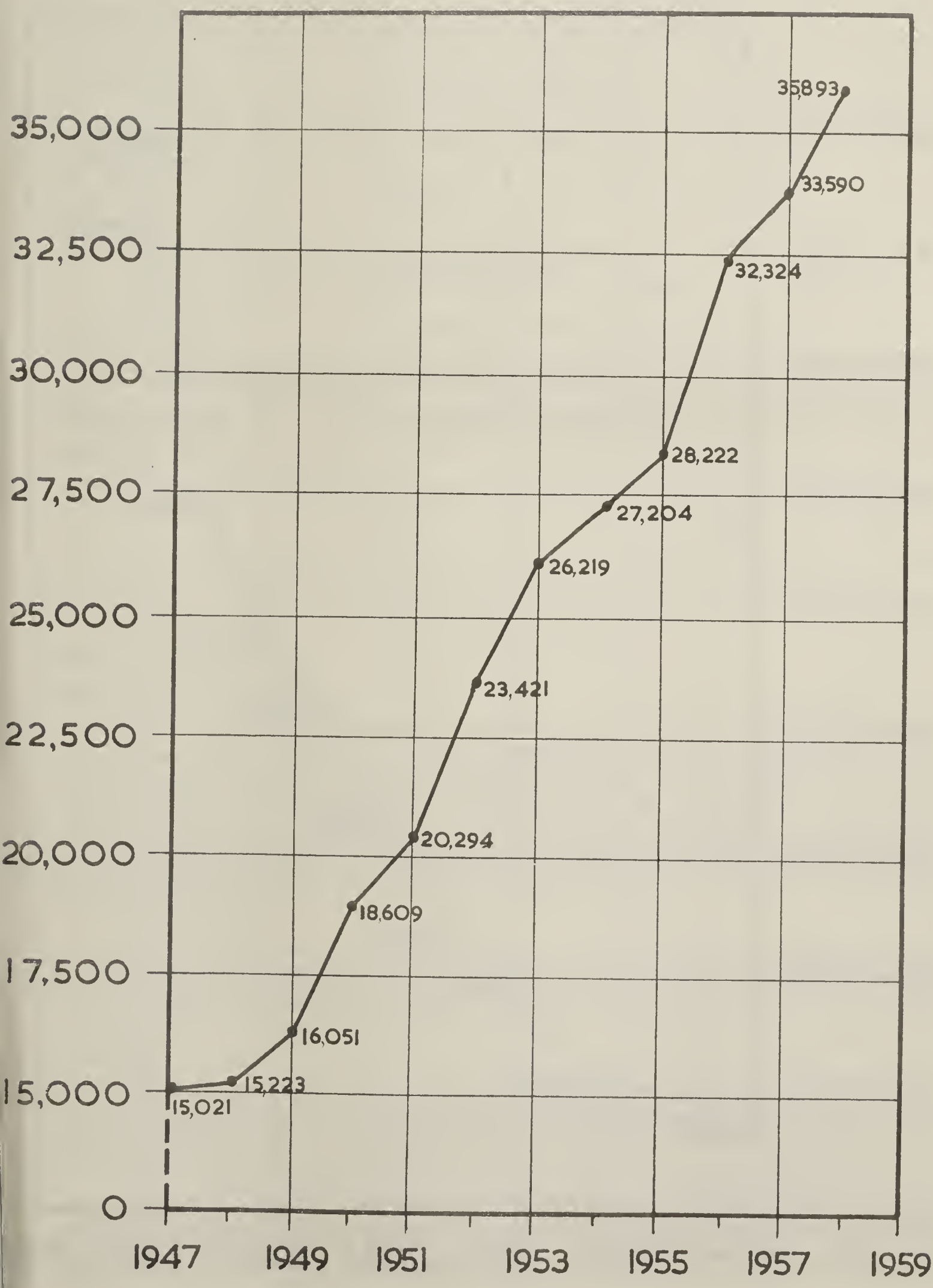
TABLE 64

MAIN CAUSES OF MORBIDITY OF IN-PATIENTS IN GENERAL HOSPITAL 1957 AND 1958

	1957		*1958*	
	Admissions	*Deaths*	*Admissions*	*Deaths*
Enteric Group	105	4	140	4
Typhus	23	—	16	—
Malaria	51	3	52	1
Diphtheria	43	5	36	4
Influenza	358	28	23	—
Dysentery, Diarrhœa and Enteritis ...	1,573	164	2,142	174
Leprosy	27	1	16	—
Tuberculosis Respiratory System ...	942	103	747	65
Other Tuberculosis Diseases	546	70	539	40
Cancer	1,636	307	1,823	331
Beri-Beri	31	4	35	8
Cerebral Hæmorrhage	187	131	155	123
Diabetes	246	19	294	8
Bronchitis	334	14	438	7
Pneumonia all forms	1,757	374	1,759	455
Other Respiratory Diseases	2,628	45	2,625	57
Ulcer of Stomach, Duodenum, etc. ...	793	26	913	32
Ankylostomiasis	94	—	73	—
Other intestinal parasites	90	—	78	3
Appendicitis	1,574	8	1,954	11
Cirrhosis of Liver	226	52	242	52
Acute and Chronic Nephritis	794	82	789	82
Venereal Affections	166	24	169	23
Congenital debility, Malnutrition Premature Birth, etc.	689	87	725	123
Suicidal	108	29	77	10
Other forms of Violence	3,912	190	4,248	211
Other Diseases	14,657	815	15,784	915
Total ...	33,590	2,585	35,892	2,739

GENERAL HOSPITAL

TOTAL NUMBER OF IN-PATIENTS TREATED



GENERAL HOSPITAL

TOTAL NUMBER OF OUT-PATIENTS TREATED

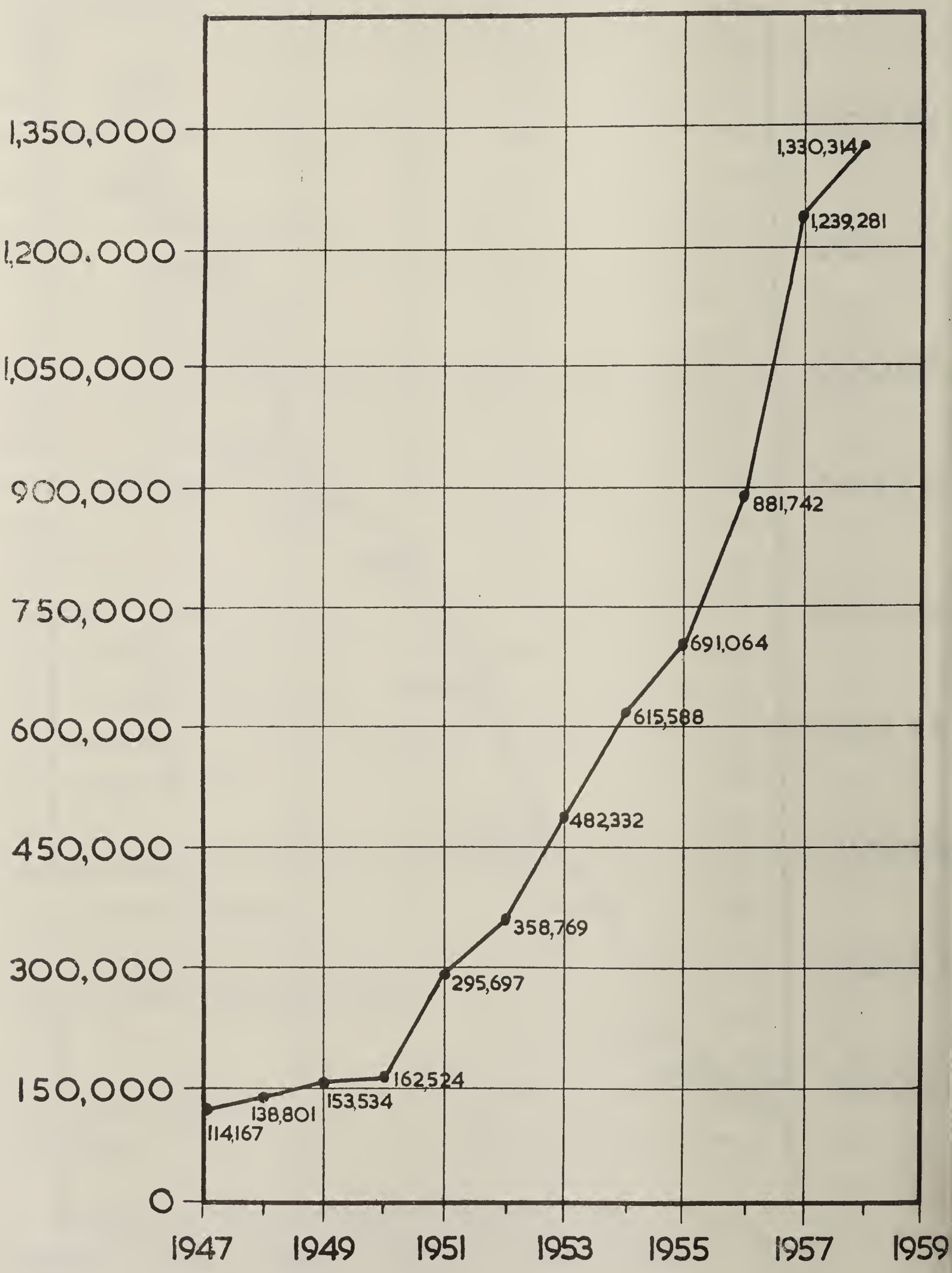


TABLE 65

UNITS IN GENERAL HOSPITAL

Unit	Head of Unit	Basic Beds
Medical Unit I ..	Professor G. A. Ransome, F.R.C.P., M.R.C.S.	150
Medical Unit II ..	Professor E. S. Monteiro, M.D., F.R.C.P., F.R.F.P. & S., D.C.H.	189
Pædiatric Unit	Dr. (Miss) C. E. Field, M.D., M.R.C.S., M.R.C.P.	300
Surgical Unit "A" ..	Professor G. S. Yeoh, F.R.C.S., L.R.C.P., M.B., B.chir.	136
Surgical Unit "B" ..	Mr. H. M. McGladdery, F.R.C.S. (Retired in August) Dr. K. Vellasamy, L.M.S. (Acting) ..	143
Surgical Unit "C" ..	Professor A. G. Karlen, M.D., F.R.C.S. ..	120
Ear, Nose and Throat ..	Dr. Au Kee Hock, L.M.S.	60
Ophthalmic Unit ..	Dr. Wong Kin Yip, L.M.S., D.O. ..	85
Sick Bay	———	8
	Total ..	1,191

THE MEDICAL UNITS

Medical Unit I

Research in Progress

339. About 800 patients were seen in the Diabetes Clinic during the year. The total number of diabetics registered since the beginning of 1953 now stands at 1,438. A greatly increased number of new patients have been seen this year, due mainly to the awareness of the population of the availability of oral anti-diabetic drugs in the hospital. Of 770 cases seen during the year and analysed, 490 are male patients and 280 female patients. Chinese patients predominate with 385, 269 Indians, 65 Malays, 29 Sikhs, 16 Eurasians and 7 Europeans.

340. Tolbutamide continues to be the main oral anti-diabetic drug used in the clinic. 76.2 per cent of the patients are at present receiving oral treatment, 17 per cent insulin injections and the remaining 6.8 per cent are either maintained on dietary restriction alone or on combined oral and insulin therapy.

341. A trial in the clinic of tolhexamide (L-cylohexyl-2-p-tolysulphonylurea) in 78 diabetics is now being published; there appearing to be no significant differences in the clinical effects of tolhexamide and tolbutamide.

342. Increasing experience with *corticosteroid therapy,* particularly with out-patients attending the Unit Nephritis, Blood, Cirrhosis and Rheumatoid Arthritis Clinics, has confirmed the need for very careful supervision of all patients on these drugs. In Singapore the incidence of pulmonary tuberculosis,

peptic ulceration and osteoporosis resulting from corticosteriod therapy appears to be particularly high, though readily amenable to prompt treatment. A trial in the Unit with a new corticosteroid, triamcinolone, is being published and has revealed arthritis to be an aparent complication of the use of this drug in women. Since this finding was published and although it has not as yet been confirmed by other investigators, further cases have been observed in the Unit.

343. Many patients are seen in Singapore with hepatic cirrhosis, probably following a viral hepatitis. They present a difficult therapeutic problem because there have been few objective evaluations of specific treatment. A controlled trial is now in progress in the Unit of treatment with testosterone and prednisolone. Both these treatments have been variously reported in the literature as being either valuable or useless in cirrhosis of the liver. The results in the Unit so far are hopeful in both groups but a long study will be required to give conclusive results.

344. In the Blood Clinic a comprehensive study has been started on the *incidence of the various types of leukæmia* in Singapore during the ten year period 1949—58. From a preliminary study of over 200 cases based on the Unit clinical records, post-mortem reports (with collaboration of the Government and University Departments of Pathology) and death certificates (with the aid of the Registrar of Deaths), it has been confirmed that the chronic form of lymphocytic leukæmia is very uncommon in Singapore. It is the commonest form of leukæmia in many temperate countries, and the reason for this difference in incidence is being studied.

345. Many individual *hæmatological problems* are also being studied in the Unit, particularly the therapeutic value of splenectomy and corticosteroids in thalessæmia and hæmoglobin H disease, the association of megaloblastic erythropoiesis and various hæmoglobinopathies, the improvements in anticoagulatent therapy control, and the treatment of leukæmia. A case report of di Guglielmo's erythræmia is being published and a new hæmorrhagic syndrome due to ovarian deficiency has been reported.

346. Research into the ætiological factors important locally in the production of a raised blood pressure and the use of the newer hypotensive drugs is now under extensive study.

Chest Clinic

347. Patients suspected of bronchiectasis or cystic disease of the lung are being referred to the Unit for clinical examination, further investigations and treatment. Nearly 100 patients are now under study. This group will add much to the knowledge of the ætiology and the management of chronic suppurative conditions of the lung which have since 1952 been a line of research in this Unit.

348. The investigation, treatment and follow up of eosinophilic lung patients continues. There have been 211 new cases of eosinophilia referred and of these 151 are proven eosinophilic lung.

Heart Disease in Pregnancy

349. A group of about 200 women with acquired or congenital heart disease complicated by pregnancy are being studied carefully from the point of view of management during the antenatal period and in the puerperium. There is a special weekly clinic for these patients where their cardiac condition is carefully assessed and treatment instituted where necessary. In addition, these patients are seen fortnightly at the cardiac ante-natal clinic in the Kandang Kerbau Maternity Hospital by the obstetrician and a medical officer from this Unit.

350. A new reflex tendon jerk *The Great Toe Jerk* has been used extensively for the last two years and because of its usefulness an article on it by Professor G. A. Ransome has been published in the *British Medical Journal.*

Medical Unit II

Research

351. The Study of stellote ganglion Block suggests that its beneficial effect is produced by factors other than the stellote ganglion itself, and this aspect is now under investigation.

352. Preliminary studies in cerebral arteriography have been completed and the technique is now one of normal investigational routine in the hospital. Further studies continue in evaluating the normal and abnormal vasculature of the brain in relation to disease.

353. The study of epilepsy is continuing with special reference to the response to treatment and electro-encephalographic and clinical manifestations.

354. The series of cases on Congential Heart Disease for active study is now completed.

355. The studies into hepatocellular failure continue and investigations of the treatment of primary hepatic carcinoma with X-radiation and/or Alloxan is well under way with encouraging results.

356. Since the introduction of the oral hypoglycæmic agents in recent years, much work has been done in his clinic as in most diabetes clinics in the world in trying to assess the value of these drugs in the treatment of diabetes mellitus. The work in assessing the efficacy of these drugs, which was started last year is being continued. At the present, work is confined to Tolbutamied (Rastinon) and P607, and it is hoped, in the near future, to publish a comprehensive survey of the value of these oral hypoglycæmic drugs in the management of diabetes mellitus. The study on the efficacy of Chlorpropamide (P607) as a hypoglycæmic agent has resulted in an invitation from the Academy of Sciences of New York to Dr. Ho Yuen to read a paper on 'The Problem of Diabetes in the Singapore Population and the Impact of Oral Anti-diabetics on its Management'.

Pædiatric Unit

357. During the year all wards in the Mistri Wing were in full use for child care.

358. The increase in admissions continued during 1958. The daily admission rate works out at 26.8 persons and the average stay in hospital 6.5 days. In spite of the rise in admissions, the mortality rate has fallen to the lowest ever recorded.

359. There has been more than 50 per cent increase in repeat cases due to a further improvement in the follow-up and also out of necessity due to the rapid turnover in the wards.

360. Gastro-enteritis easily remains the commonest cause for admission but pneumonia persists as the commonest killing disease. The mortality rate for both has fallen except for pneumonia of the new-born. There is a marked drop in tuberculosis meningitis admissions from 93 in 1957 to 52 in 1958 with a marked fall in mortality rate. This might be related to the B.C.G. campaign. Furthermore, although there is an increased number of cases of pulmonary tuberculosis, the mortality has also fallen. There has been a marked increase in infective hepatitis and also jaundice of unknown ætiology with a rise in mortality particularly in the latter group.

TABLE 66

SUMMARY OF CASES TREATED IN PAEDIATRIC UNIT

Diagnosis	Admissions	Total Deaths	Deaths within 24 hours	% Mortality Rate on 9,697 admissions
Anæmia:				
Aplastic	2	2	2	0.021
Hæmolytic	54	10	4	0.103
Rh. and ABO incompatibility ..	..	..	..	..
Nutritional	101	32	12	0.328
Others	46	..	..	..
Asthma	391	12	10	0.123
Beri-beri	22	10	5	0.103
Blood Dyscrasias:				
Leukæmia	5	3	2	0.031
Others	47	13	5	0.134
Bronchiectasis and Pulmonary Collapse	36	11	5	0.110
Bronchitis	437	11	7	0.110
Cellulitis:				
Abscess, Boils	327	13	9	0.134
Cerebral Abscess	6	6	4	0.063
Cerebral Hæmorrhage ..	45	23	15	0.230
Cerebral Tumour	21	7	2	0.072
Congenital Abnormalities:				
Heart	261	84	46	0.861
Cleft Palate	59	1	..	0.010
Intestinal obstruction ..	43	15	2	0.155
Pyloric Stenosis	8	1	..	0.010
Phimosis	10	..	..	..
Hydrocephalus and Meningocœle	12	2	2	0.021
Others	156	14	5	0.144
Encephalitis	190	41	30	0.410
Epilepsy	32	..	..	..
Empyema	51	24	9	0.246
Gastro-enteritis	2,109	216	116	2.22
Head Injury	74	4	1	0.042
Heart Failure	88	38	6	0.389
Hernia	71	2	..	0.021
Hydrocephalus, acquired ..	25	5	1	0.052

TABLE 66—*continued*

Diagnosis	Admissions	Total Deaths	Deaths within 24 hours	% Mortality Rate on 9,697 admissions
Infectious Diseases:				
Amœbiasis	28	..	..	..
Bacillary Dysentery ..	13	1	..	0.010
Chicken Pox	7	..	..	..
Diphtheria	34	4	..	0.042
Measles	171	9	3	0.093
Mumps	4	..	..	..
Poliomyelitis	32	..	..	..
Typhoid	29	..	..	..
Whooping Cough	72	..	..	..
Others	22	..	..	..
Infective Hepatitis	168	12	8	0.123
Influenza	2	1	..	0.010
Jaundice of unknown Aetiology ..	119	20	12	0.410
Kernicterus	38	26	22	0.267
Laryngo-tracheo-bronchitis ..	8	1	..	0.010
Lung Abscess	8	7	4	0.072
Lung Cyst	11	..	..	..
Malaria	4	..	..	..
Malnutrition	51	9	2	0.093
Meningitis-purulent	72	34	14	0.349
Mental Deficiency:				
Mongol	102	5	1	0.052
Cretin	8	1	..	0.010
Microcephaly and others ..	14	3	2	0.031
Nasopharyngitis and Tonsilitis ..	1,307	9	1	0.093
Nephritis:				
Acute	368	5	3	0.052
Subacute	73	3	..	0.031
Chronic	3	..	..	..
Otitis Media	101	6	1	0.063
Pneumonia over 4 weeks ..	1,362	364	219	3.76
Pneumonia of newborn ..	153	76	38	0.78
Pneumothorax	3	3	1	0.031
Poisoning:				
Kerosene	31	1	..	0.010
Alkali	20	2	..	0.021
Others	77	..	..	..

TABLE 66—*continued*

Diagnosis	Admissions	Total Deaths	Deaths within 24 hours	% Mortality Rate on 9,697 admissions
Prematurity	59	17	4	0.175
Pyelitis	54	1	..	0.010
Rheumatic Diseases:				
Acute	43	1	..	0.010
Rheumatoid	15	..	..	..
Chorea	6	..	..	..
Cardiac	31	3	..	0.031
Rickets	28	2	2	0.021
Scurvy	2	..	..	..
Septicæmia	32	19	13	0.195
Skin Diseases: ..				
Eczema	11	..	..	..
Pemphigus	18	1	..	0.010
Impetigo	12	..	..	..
Allergic Dermatitis ..	14	..	..	..
Others	31	..	..	..
Stomatitis:				
Thrush	69	2	..	0.021
Others	60	..	..	..
Syphilis, Congenital	9	1	1	0.010
Tetanus	36	13	5	0.134
Tuberculosis:				
Pulmonary	140	5	..	0.052
Meningitis	52	16	3	0.164
Abdominal	6	3	..	..
Bone and Joint	10	..	..	..
Glandular	12	..	..	..
Others	13	1	..	0.010
Worms:				
Ankylostomiasis	71	1	..	0.010
Ascariasis	81	9	7	0.093
Others	22	2	..	0.021
Miscellaneous	1,026	87	39	0.89

THE SURGICAL UNITS

361. The volume of surgical work continues to increase. The total number of operations during the year was 40,806, an increase of 2,483 over the previous year. This represents an increase of about 6 per cent.

The graph on page 109 shows the increase in surgical admission and operations that have been occurring from year to year. Table 70 gives a return of operations done in the Surgical Units. There was a reduction of the operations done in all Surgical Units during the poliomyelitis epidemic.

362. The year continues to show increasing demands on the operating theatres and wards. This has been partly due to the increase in the numbers of major emergencies of which an increasing proportion has been referred to the unit from the physicians.

363. Surgical Unit 'C' is the Orthopædic and Traumatic Unit of the Hospital. During the poliomyelitis epidemic in the latter part of the year, post-poliomyelitis paralytic cases were transferred from the Middleton Hospital for treatment mainly in physiotherapy. Ward 61, previously occupied by the Department of Physiotherapy, was re-opened and this together with half of Ward 47, an ophthalmic ward, were utilised for hese patients. Altogether 104 paralytic post-poliomyelitis cases were admitted into the General Hospital.

364. In addition to the work at the General Hospital, the staff of Surgical Unit 'C' were responsible for the orthopædic cover at:—

(i) St. Andrew's Orthopædic Hospital at Siglap with approximately 120 beds;

(ii) A ward at Middleton Hospital with approximately 40 beds for the treatment of late cases of poliomyelitis;

(iii) A ward at Tan Tock Seng's Hospital with 60 beds where adult Bone and Joint Tuberculosis cases and paraplegia cases are kept;

(iv) Red Cross Home, Tanah Merah with 20 beds for crippled children.

ST. ANDREW'S ORTHOPÆDIC HOSPITAL, SIGLAP

365. The staff of the Hospital consists of a Resident Medical Officer. 1 Matron, 2 Sisters, 2 Staff Nurses, 21 Assistant Nurses and 1 Hospital Assistant. Dr. E. Crowe, M.B., B.S., F.R.C.S. was the Resident Medical Officer.

366. The number of beds (for children up to 14 years) is 120. There were 75 male and 64 female patients.

367. There were no cases of acute poliomyelitis. 98 per cent of the children admitted were cases of bone tuberculosis, mostly spine and hips, but many children had multiple lesions and routine X-ray of all chests revealed a number of cases of pulmonary tuberculosis.

368. The average stay of each child continued to be 12 months—all were asked to attend the follow-up out-patient clinic when they left hospital; most of them receive a tuberculosis allowance which helps to ensure regular attendance at the clinic as well as to maintain a fair standard of health—some do badly at home and a certain number were re-admitted for further treatment, especially those who had conservative (non-operative) treatment.

School

369. The children have school on five mornings a week and this year there have been a larger number of voluntary helpers, whose services are appreciated. Voluntary helpers from the R.A.F. (Changi) still come regularly every Sunday morning.

Concert

370. The annual concert was held on 19th December and was a great success. Lady Goode and the Minister for Health attended.

RED CROSS HOME, TANAH MERAH

371. The work has continued as before. A certain change in admission policy has been accepted lately in so far as more short staying cases with better prognoses have been admitted, instead of as earlier cases needing years and years of care. This has been done for two reasons:—

(i) to give more children the benefit of a period at the home, and

(ii) to avoid cases getting too accustomed to the life and advantages of the home and causing too many difficulties for them when they have to be discharged home as no other possibilities are at hand.

EAR, NOSE AND THROAT UNIT

372. The scope of the department has been gradually widened and extended into the fields of major surgery of the head and neck in relation to malignant growths, laryngectomy, block dissection of the glands in the neck, of the maxilla and mandible in conjunction with the Dental Department, and treatment of brain abscess secondary to ear infection. It is expected that when the operating microscope (which is on order) is available, it will be possible to perform micro-surgery such as stapedolysis, fenestration, tympanoplasty and myringoplasty.

373. A summary of the work of the Unit is given in Table 67.

TABLE 67

EAR, NOSE AND THROAT UNIT—SUMMARY OF WORK

	Out-Patients		*Operations*	
Year	*New Cases*	*Repeats*	*Major*	*Minor*
1952	4,126	10,541	1,186	939
1953	5,492	10,806	1,686	1,008
1954	6,642	12,139	2,042	1,217
1955	8,675	21,500	2,414	1,807
1956	9,563	19,228	1,855	1,815
1957	11,279	21,627	1,488	2,796
1958	12,526	18,480	1,158	2,537*

* Reduced operations as a result of the poliomyelitis epidemic.

OPHTHALMIC UNIT

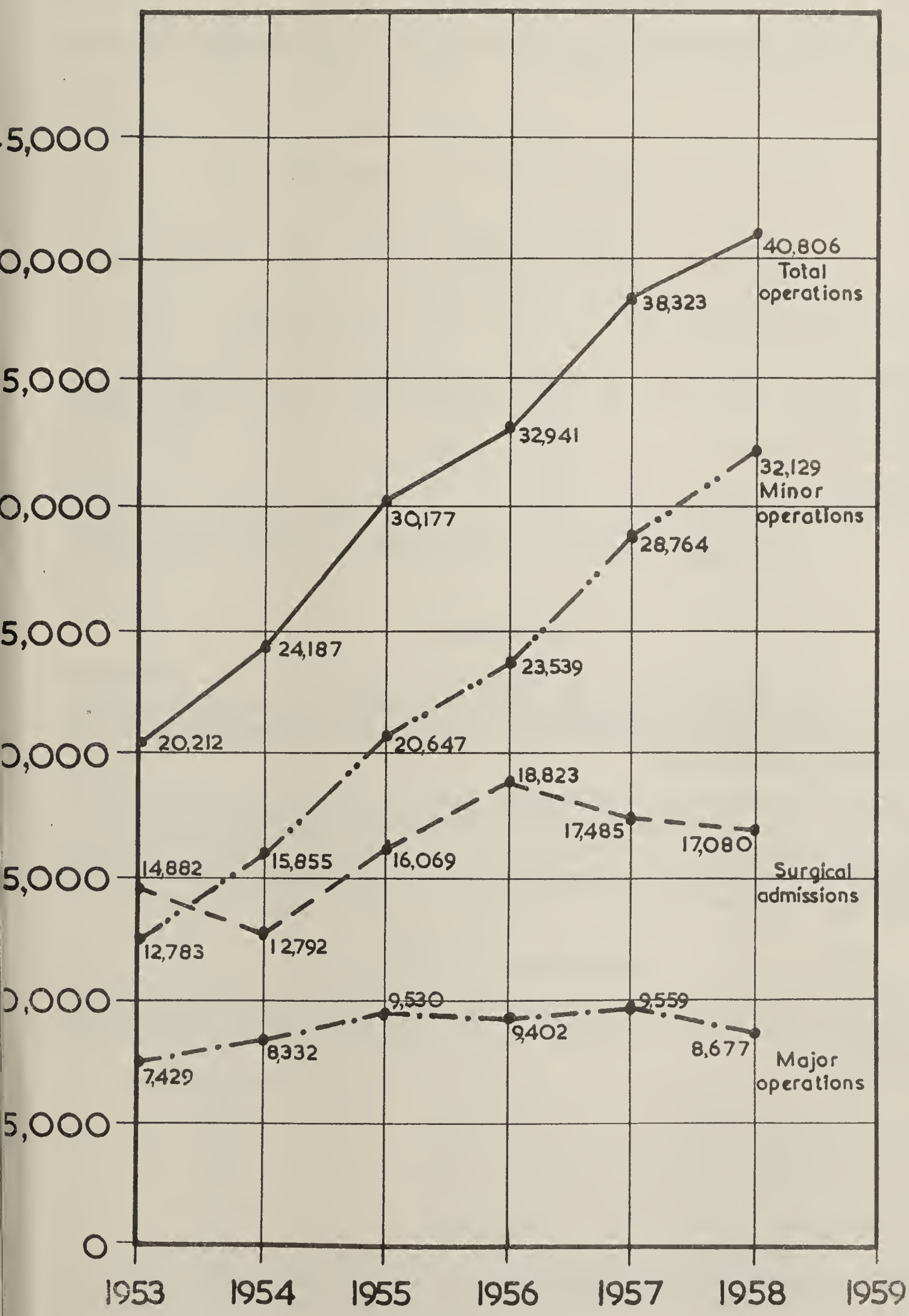
374. There was a great increase in the attendances at the clinic during the year. The number of new cases was 19,311, and 70,904 of repeated attendances as compared with 17,563 and 54,714 respectively in the previous year. The steady increase in the number of attendances for the past decade is shown by the figures below:—

1950	16,512
1951	17,975
1952	18,955
1953	21,623
1954	27,543
1955	39,841
1956	44,428
1957	54,714
1958	70,904

375. During the year 824 major operations and 3,707 minor operations were done.

GENERAL HOSPITAL

OPERATIONS AND ADMISSIONS TO SURGICAL UNITS



ANÆSTHETIC UNIT

376. Dr. B. E. G. D'Bras, M.B., B.S., F.F.A.R.C.S., was the Senior Anæthetist after the retirement of Dr. E. G. Hudson, M.R.C.S., L.R.C.P., on Malayanisation at the end of 1957.

377. During the year clinical trials on 'Halothane' was carried out in the Unit.

378. An Out-patient Therapeutic Unit has been in operation for cases for the relief of pains, etc. This work is still in its initial stages.

TABLE 68

ANALYSIS OF ANAETHETICS ADMINISTERED, 1958

Operating Theatres	General Anæs.	Spinal Anæs.	Local Anæs.	Major Cases	Minor Cases	Total
Surgical Unit "A"	2,981	822	1,835	2,866	2,772	5,638
Surgical Unit "B"	2,469	649	2,003	2,399	2,722	5,121
Surgical Unit "C"	2,391	30	4,111	1,430	5,102	6,532
Kandang Kerbau Hospital ..	7,594	255	62	1,125	6,786	7,911
E.N.T. Unit	807	..	2,007	1,158	1,656	2,814
Ophthalmic Unit	220	..	..	..	..	220
Dental Clinic	3,601	..	..	..	..	3,601
Total ..	20,063	1,756	10,018	8,978	19,038	31,837

SKIN CLINIC

379. The Skin Clinic is one of the out-patient clinics run by Medical Unit II, under the direction of Dr. Khoo Oon Teik, M.D., M.R.C.P., F.R.F.P.S. 6,630 new cases, with a total attendance including old cases numbering 16,397, were seen during the year.

380. The eczema dermatitis group continued to be the main condition seen followed by seborrhœic affections. Yaws and scabies were rarely seen. A few cases of leprosy with an average of three cases are seen each month but this figure was exceeded by psoriasis. Lupus erythematosus as well as skin tuberculosis were less common, but a few cases were seen each month.

BIOCHEMISTRY DIVISION

381. The number of analyses carried out during the year totalled 7,059 as compared with 7,431 in the previous year. The main routine analyses were as follows:—

	No. of specimens
Serum potassium	1,614
Serum sodium	1,530
Serum chlorides	1,436
Serum bilirubin	602
Serum calcium	315
Blood glucose	271
Abnormal blood pigments	253
Electrophoresis of serum proteins	183

382. In addition to the above, other types of biochemical investigations undertaken during the year included the following: blood pyruvic acid, urinary 17-ketosteroids and 17-ketogenic steroids, ascrobic acid in blood and urine, paper chromatography of urinary amino-acids and sugars, fœtal hæmoglobin and fæcal fat.

DIETETIC SECTION

383. The average daily cost of food supplied is listed below:—

	$ c.
(i) Paying patients (*a*)	3 18
(ii) Paying patients (*b*)	2 96
(iii) Child patients	1 13
(iv) Non-paying patients	1 10

PHYSIOTHERAPY DIVISION

384. During the year 9,681 new cases and 136,781 repeat cases were treated compared with 10,320 new cases and 137,251 repeat cases in 1957.

385. The new physiotherapy division is housed in the rear wing of Stanley Block and is one of the finest units in this region.

OCCUPATIONAL THERAPY

386. During the year 12,435 patients were visited by Occupational Therapists in the wards; a further 18,153 attended treatment in the Occupational Therapy Unit. 94 patients were visited in their homes.

ALMONER'S DIVISION

TABLE 69

SUMMARY OF WORK OF ALMONER'S DIVISION, 1958

	Cases
Almoner Medical Unit I and Eye Clinic	1,208
Almoner Medical Unit II	1,025
Almoner Radiotherapy and E.N.T. Units	304
Almoner Surgical Units 'A' and 'B'	1,079
Almoner Orthopædic Unit 'A'	1,415
Almoner Orthopædic Unit 'B'	1,046
Almoner Pædiatric Units East and West	1,048
Almoner Out-Patient Department	1,615
Almoner Rural Clinics:—Kallang	302
Bukit Timah	156
Bukit Panjang	174
Tan Tock Seng's Hospital ...	402
Paya Lebar	88

387. These figures show a marked increase in the number of patients seen by the Almoner in each unit in 1958.

TABLE 70

GENERAL HOSPITAL, SINGAPORE

OPERATIONS FOR THE YEAR, 1958

Month	SURGICAL 'A' UNIT			SURGICAL 'B' UNIT			SURGICAL 'C' UNIT			OPHTHALMIC UNIT			EAR, NOSE AND THROAT UNIT		
	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total
January	265	568	833	193	489	682	143	1,154	1,297	90	340	430	111	196	307
February	157	428	585	158	398	556	78	1,082	1,160	37	221	258	93	179	272
March	209	529	738	175	506	681	73	1,169	1,242	75	257	332	109	237	346
April	238	535	773	211	424	635	118	1,007	1,125	60	301	361	114	250	364
May	284	601	885	236	596	832	125	1,054	1,179	71	279	350	131	253	384
June	248	572	820	202	689	891	119	939	1,058	75	303	378	86	207	293
July	252	700	952	222	611	833	138	1,057	1,195	79	318	397	143	267	410
August	253	576	829	213	598	811	120	1,130	1,250	80	325	405	125	272	397
September	267	679	946	204	578	782	123	1,107	1,230	58	367	425	116	215	331
October	267	612	879	222	431	653	141	1,154	1,295	73	376	449	60	130	190
November	210	556	766	196	355	551	110	1,032	1,142	65	290	355	25	130	155
December	216	594	810	167	352	519	142	1,096	1,238	61	330	391	45	128	173
Total ..	2,866	6,950	9,816	2,399	6,027	8,426	1,430	12,981	14,411	824	3,707	4,531	1,158	2,464	3,622

TABLE 71

STAFF OF GENERAL HOSPITAL AS ON 31ST DECEMBER, 1958

Section	Administrative Officers Superscale	Specialist Officers Grade *E*	Specialist Officers Grade *G*	Medical Officers	Housemen	University Professors	Senior Lecturers	Lecturers	Sisters	Nurses	Physiotherapists	Occupational Therapists	Radiographers	Almoners	Hospital Assistants	Clerical Staff	Hospital Servants	Dieticians
Administration	1	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	15	..
Medical Unit I	..	..	1	7	6	1	1	1	2	40	..	..	..	1	2	1	15	..
Medical Unit II	..	1	2	6	12	..	..	..	2	40	..	..	..	1	2	1	20	..
Pædiatric Unit	..	..	1	5	5	1	1	..	2	40	..	..	..	1	2	1	15	..
Surgical Unit 'A'	..	1	1	5	5	..	..	..	2	40	..	..	..	1	2	1	15	..
Surgical Unit 'B'	..	1	1	6	9	1	1	2	2	40	..	..	..	1	3	1	15	..
Surgical Unit 'C' (including Artificial Limb Workshop, Physiotherapy and Occupational Therapy) ..	..	..	1	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Anæsthetic Unit	..	..	..	1	..	..	..	..	2	24	..	..	..	..	2	..	36	..
St. Andrew's Orthopædic Hospital ..	..	..	..	2	..	..	..	..	2	24	..	..	..	..	..	..	15	..
Ear, Nose and Throat Unit ..	..	..	1	3	4	..	..	..	..	..	..	..	19	..	..	2	6	..
Radiology	..	1	3	4	..	..	..	..	..	..	13	..	..	..	..	2	6	..
Physiotherapy	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	4	..
Occupational Therapy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	44	3
Dietician and Kitchen	..	..	..	..	..	..	..	..	..	..	..	..	..	14	..	..	..	..
Almoners Division	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30	..
Maintenance of Grounds, etc. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Chapter Fourteen

OUT-PATIENT DISPENSARY SERVICE

388. This report covers the static and mobile dispensary services of the Island. During the year under review a total of 1,560,222 were recorded from the various clinics; 411,713 were new cases and 1,148,509 were repetitions; of these approximately 73 per cent were Chinese, 15 per cent Indians, 10 per cent Malays, and the balance of 2 per cent between Europeans, Eurasians and other nationalities. Besides the clinics listed in Table 72 this includes attendances at clinics reported in the Chapter under 'Other Special Departments'. The staff, clinic sessions and distribution of out-patient services is given in Table 72. Dr. Toh Chiong Hieng, L.M.S. (Singapore) was in charge of the Service.

Table 72

STAFF, CLINIC SESSIONS AND DISTRIBUTION OF OUT-PATIENT DISPENSARIES

Clinic	Sessions	Medical Officers	Sister	Nurses	Hospital Assistants	Lab. Assistants
General Hospital Out-patient and Casualty Unit	Out-patients: 8 a.m.—4 p.m. Casualty and Emergency Out-patients: 24 hour service.	10	3	10	20	1
Tan Tock Seng's Hospital Out-patient Unit	Morning Sessions	1	..	..	1	..
Kandang Kerbau Hospital Out-patient Unit	Morning and afternoon sessions	2	..	1	..	..
Kallang Out-patient Clinic	Morning Sessions	3	1	3	1	1
Paya Lebar Outdoor Dispensary	Morning Sessions	1	..	1	1	..
Bukit Timah Outdoor Dispensary	Morning and afternoon sessions	Part-time work by M.O. Rural North and West	..	1	1	..
Pasir Panjang Outdoor Dispensary	Morning and afternoon sessions	Part-time work by Kallang O.D.D.	..	1	1	..

TABLE 72—*continued*

Clinic	Sessions	Medical Officers	Sister	Nurses	Hospital Assistants	Lab. Assistants
Rural North and West Dispensary Service	Bukit Panjang: Thrice weekly morning and afternoon sessions Thomson Road: Twice weekly and afternoon sessions Holland Road: Once weekly morning sessions	1	..	2	1	..
Rural East Dispensary Service	Changi Points: 2 afternoon sessions weekly Kampong Batak: 2 afternoon sessions weekly Gulega Road: 1 afternoon session weekly	Part-time work by M.O. Changi Prison	..	..	Part-time work by H.A. i/c. Travelling Dispensary	..
Pulau Tekong Clinic ..	Morning and afternoon sessions	Do.	..	..	1	..
Pulau Brani Clinic ..	Morning and afternoon sessions	..	..	..	1	..

General Hospital: Out-patient and Casualty Unit

389. The Out-patient and Casualty Unit of the General Hospital recorded a total of 732,878 cases from different sections of the Unit made up as follows:—

TABLE 73

CASES SEEN AT GENERAL HOSPITAL OUT-PATIENT AND CASUALTY UNIT

	NEW CASES			REPEAT CASES			Total
	Male	Female	Child	Male	Female	Child	
General Out-patient cases	46,272	4,655	50,926	84,975	44,941	50,060	323,725
Casualty cases ..	35,128	9,648	18,043	11,567	2,195	5,270	81,851
Treatment/Dressings ..	..	..	..	..	..	..	291,947
Admissions ..	..	..	..	..	..	..	35,355
Total ..	81,400	56,199	68,969	96,542	47,136	55,330	732,878

390. Below are comparative figures from:—

1954	...	...	466,904
1955	...	...	509,053
1956	...	...	517,669
1957	...	...	625,839
1958	...	...	732,878

General Out-patients

391. 323,725 were recorded against 279,083 in 1957, an increase of 44,642. 173 males and 168 females were examined for assessment of age for the Labour Department, Commissioner for Registration, Immigration and Police Departments. 622 males and 173 females positive tuberculosis cases were detected and referred to Tan Tock Seng's Hospital.

Casualty Room

392. 81,851 casualties were seen in 1958 against 73,566 in 1957, an increase of 8,285.

	1955	*1956*	*1957*	*1958*
Road Accidents	4,010	4,047	4,790	5,760
Examination for Alcoholic Intoxication	967	1,035	1,082	1,319
Rape and other sexual offences ...	74	53	56	67

Treatment and Dressing Rooms

393. This section undertakes the dressing and treatment of the Out-patient and Casualty Unit, Skin Clinic, Orthopædic, Surgical and Medical Out-patient Units of the Hospital and injections of streptomycin of tuberculosis out-patients cases from Tan Tock Seng's Hospital.

394. During the year under review 291,947 treatments were done, an increase of 53,988 from the previous year's figure of 237,959.

Laboratory

395. 24,181 routine specimens were examined during the year.

Urine	...	...	13,279
Blood	...	...	7,463
Fæces	...	...	2,609
Smears	...	...	830
	Total	...	24,181

Tan Tock Seng's Hospital General Out-patient Unit

396. During the year 23,945 out-patient attendances were recorded. The Clinic is for male out-patients and the staff of Tan Tock Seng's Hospital.

Kandang Kerbau General Out-patient Unit

397. This Clinic is for women and children only.

398. During the year 35,988 women and 57,380 children attended the Clinic.

Kallang Out-patient Clinic

399. This out-patient clinic functions every morning except Sundays and holidays. The Tuberculosis clinic functions in the afternoons from Monday to Thursday, and Psychiatric Clinic and School clinic functions on Friday afternoons.

400. At this clinic 105,549 patients were seen.

Rural North and West Dispensary Service

401. The total attendances at the general out-patient clinics during the year with comparative figures is shown below:—

	1956	*1957*	*1958*
Bukit Panjang Clinic	22,890	27,882	33,813
Thomson Road Clinic	15,283	17,088	19,942
Holland Road Clinic	5,456	4,441	6,447
Total ...	43,629	49,411	60,202

402. The above figures show a total increase of 10,791 out-patient attendances in 1958 in these clinics. 42,744 injections and dressings were also carried out in these clinics.

Bukit Timah Outdoor Dispensary

403. This clinic is housed in the Maternity and Child Health Clinic at Bukit Timah. The primary function of the clinic is to continue treatment of patients resident in this area, and who have been discharged from the hospitals.

404. The Hospital Assistant treats minor conditions and refers the more serious illness to the Bukit Panjang or the General Hospital. A total of 25,465 attendances were reported in 1958.

Paya Lebar Outdoor Dispensary

405. At this clinic 115,503 out-patients were seen.

Rural East Dispensary Service

406. The total attendances at the general out-patient clinics is shown below:—

	1956	*1957*	*1958*
Changi Point Clinic	4,073	2,834	3,707
Kampong Batak Clinic	5,574	4,342	3,292
Gulega Road Clinic	4,028	3,785	3,863
Total ...	13,675	10,961	10,862

Pulau Tekong Clinic.

407. This clinic and cottage hospital is situated on the island of Pulau Tekong and is staffed by one Hospital Assistant. The Medical Officer in charge, Changi Prison visits the clinic weekly on Wednesday mornings.

408. 7,207 cases were recorded during the year.

Pulau Brani Outdoor Dispensary

409. This clinic is situated at the island of Pulau Brani. During the year 8,793 out-patients were seen.

Mobile Dispensary Service

410. In January 1958 another travelling dispensary was added to the fleet of three dispensaries in operation. These four dispensaries each with one Hospital Assistant in charge, visit rural areas and attend to minor illnesses.

411. Two floating dispensaries are operated by the Government Health Division. Both of them are staffed by Hospital Assistants. One of the floating dispensaries carried in addition a Mobile Maternal and Child Health team.

412. Attendances at the travelling dispensaries and floating dispensaries over the past five years are given in Table 74.

TABLE 74

ATTENDANCES AT MOBILE CLINICS

	1954	*1955*	*1956*	*1957*	*1958*
Travelling Dispensary ...	46,032	76,381	77,068	78,436	122,107
Floating Dispensary ...	3,556	3,548	5,150	6,585	7,261

Chapter Fifteen

TUBERCULOSIS SERVICE

TUBERCULOSIS CONTROL UNIT

413. The Tuberculosis Control Unit came into operation at the end of 1957 and has now been in operation for a full year.

Staff

414. The staff of the Unit consisted of the Assistant Director of Medical Services (Tuberculosis), 2 Medical Officers, 1 Higher Executive Officer, 1 Health Sister, 5 Health Nurses, 20 Assistant Nurses, 5 Laboratory Assistants and 7 Laboratory Attendants.

Tuberculosis Registry

415. In accordance with the Quarantine and Prevention of Disease (Amendment) Ordinance, 1958, No. 19 of 1958, which came into operation on 1st August, 1958, all cases of tuberculosis are notifiable to the Assistant Director of Medical Services (Tuberculosis). Private practitioners are entitled to a fee of $2 for each case notified. The bulk of the notifications came from the Tuberculosis Clinic, Tan Tock Seng's Hospital and the Royal Singapore Chest Clinic (S.A.T.A.); a small number came from private practitioners. Of the total number, 733 cases were discovered by the X-ray Survey.

Tuberculosis Culture Laboratory

416. In view of the importance of bacteriological examinations in connection with tuberculosis it was decided to convert the old mortuary at Tan Tock Seng's Hospital into a Tuberculosis Culture Laboratory with a capacity of dealing with as many as 200 cultures per day.

Table 75

CULTURES DONE AT TUBERCULOSIS CULTURE LABORATORY

Nature of work	*Total Specimens*	*Positive*	*Contaminated*
Direct Smear	2,647	175	—
Concentrated Deposit	667	77	—
Sputum Culture	5,559	638	750
Laryngeal Swab Culture ...	4.308	287	118
General Culture	112	4	27
Sensitivity Test	470	—	15

Health Visitors' Division

417. To standardise tuberculosis work in various aspects in April 1958 the School Tuberculosis service came under the Tuberculosis Control Unit and its staff who have been with the service for many years were transferred. The staff of this section were engaged in the Tuberculosis-Case Finding Programme for five months from 1st July, 1958.

TABLE 76

SUMMARY OF WORK DONE BY THE HEALTH VISITORS' DIVISION, TUBERCULOSIS CONTROL UNIT, 1958

	1958
Home visits to patients	7,192
Home visits to contacts	5,829
Tuberculin Tests done	14,997
B.C.G. Vaccination done	36,515
Contact Clinic attendances	31,224

B.C.G. Vaccination

418. The B.C.G. Team continued to work on giving B.C.G. to new born infants delivered at the Kandang Kerbau Maternity Hospital. Of 25,410 discharged from the hospital in 1958 B.C.G. vaccination was given to 23,859—94 per cent response.

419. The practice of tuberculin testing three months after vaccination was discontinued in September 1958 as trials showed a 90 per cent conversion rate.

420. B.C.G. vaccination of infants under one month started in two Rural Child Health Centres in 1957 was extended to all the 20 main centres during the year. Of 16,416 births in the rural area 2,866 infants were vaccinated. The conversion rate was 98 per cent. B.C.G. vaccination was also done in schools and where emphasis was placed on the tuberculin testing of school entrants. Tuberculin negative children were given B.C.G. vaccination.

421. B.C.G. vaccination was extended to the Infant or Child Health Clinics in the City and B.C.G. vaccination was given at three such clinics. Of 17,074 infants born in the City outside Kandang Kerbau Hospital, 2,904 were given B.C.G. vaccination.

TABLE 77

TUBERCULIN TESTING

Age Group	*No. Done*	*Positive No.*	*Positive Percentage*
5– 6	5,290	1,693	32
7– 8	9,311	3,904	41.9
9–10	396	241	60.9
Total ...	14,997	5,838	—

School Chest Section

TABLE 78

NUMBER OF SCHOOLS DONE 1956–58

Year	English	Chinese	Malay	Indian	Private	Total
1956	14	30	8	..	4	56
1957	157	123	31	12	4	327
1958	140	28	20	..	..	188*

* Work interrupted by the Tuberculosis Case-Finding Programme.

TABLE 79

TUBERCULIN TESTS AND B.C.G. VACCINATION DONE IN SCHOOLS, 1956–58

Year	First Test	Retests	VACCINATIONS		Total Vaccination
			after First Test	after Retests	
1956	11,068	2,835	6,305	598	6,903
1957	31,796	3,837	19,057	1,281	20,338
1958	15,900	1,566	9,312	478	9,790*

* Work interrupted by the Tuberculosis Case-Finding Programme.

GOVERNMENT TUBERCULOSIS CASE FINDING PROGRAMME

422. This project involved the X-raying of 50,000 adults over the age of 14 in four selected areas, two in the City around Jalan Sultan and Chinatown and two in the rural area, Geylang Serai and Bukit Panjang, the full investigation, clinical and bacteriological, of cases with abnormal shadows suggestive of tuberculosis and the treatment of those cases found to be suffering from active disease.

423. The objects of the scheme were:—

(i) to ascertain the incidence of tuberculosis in Singapore so as to be able to formulate plans for its eventual control and

(ii) to discover and treat all cases with active disease especially those that were infectious.

424. It was carried out with help from Australia under the Colombo Plan, who provided equipment for the Central Culture Laboratory and a team of experts consisting of:—

Dr. Cotter Harvey (the leader of the Team and Consultant Chest Physician).

Dr. Charles Rubinstein (the Radiological Director of the Anti-Tuberculosis Association of New South Wales).

Miss G. M. J. Rodda (bacteriological technician).

Mr. L. J. Saddlier (radiological engineer).

Mr. D. J. Grant (radiographer).

425. After an intensive publicity campaign the survey commenced on 1st July, 1958, and by the end of October 1958, 50,672 residents and 4,157 non-residents was X-rayed.

426. The response of the public in all areas was excellent. In the two city areas and in one of the rural areas—Geylang Serai—about 84 per cent of the eligible population were X-rayed whilst in the other rural area—Bukit Panjang—about 74 per cent were X-rayed.

427. In both city areas the X-ray part of the programme was completed two weeks ahead of schedule and advantage was taken of these intervals to tuberculin test as many as possible of the contacts of those cases which on X-ray appeared to be suffering from active disease. The tuberculin negatives were given B.C.G. while the tuberculin positives were X-rayed.

TABLE 80

ATTENDANCES AT SCHOOLS CHEST CLINICS, 1958

	PAYA LEBAR CLINIC		NORTH CANAL ROAD CLINIC		TAN TOCK SENG SCHOOL CLINIC						INSTITUTE OF HEALTH CLINIC						Total
					School Children		School Teachers		School Clerks, Servants and Hawkers		School Children		School Teachers		School Clerks, Servants and Hawkers		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
New Cases ..	..	..	239	228	358	259	17	9	17	8	267	285	13	11	20	9	1,740
Re-Visits	14	28	559	528	2,444	1,597	296	196	116	29	2,584	2,101	50	52	54	34	10,682
Total	14	28	798	756	2,802	1,856	313	205	133	37	2,851	2,386	63	63	74	43	12,422
Combined Total ..	42		1,554		4,658		518		170		5,237		126		117		12,422

428. The investigation of cases from the Chinatown area with abnormal shadows suggestive of tuberculosis was carried out at S.A.T.A. and its co-operation in this matter is duly appreciated. The investigation of cases from the other areas was done by the Chest Physicians of Tan Tock Seng Hospital.

429. The Cardiac Clinic, Medical Unit I, General Hospital undertook the investigation of cases with abnormal cardiac shadows and the Chest Clinic, Medical Unit I, the cases of cystic lung disease and bronchiectasis.

430. A full report will be published when investigations are completed but preliminary results reveal that the incidence of active tuberculosis among those surveyed is about 3.5 per cent in the crowded city areas and about 1.5 per cent in the rural areas.

431. This was the first occasion that a Tuberculosis Case-Finding Programme was undertaken in Singapore. No provision had been made for extra staff with the result that some personnel had to be withdrawn from other sections whilst other officers had to perform extra duties in addition to their own. The success of the campaign was due to:—

(i) the hard work and enthusiasm of the personnel of the Government Medical Department who participated in this project;
(ii) the excellent standard set by the Australian Team;
(iii) the assistance from many voluntary organisations and helpers;
(iv) the strong support of the Government Information Services and the Press, both English and vernacular;
(v) the good co-operation of the public;
(vi) the high quality of the Watson-Odelca Mirror-Camera X-ray Units.

TABLE 81

DEATH RATE FROM TUBERCULOSIS

(*Rates are the number of Deaths per 100,000 population*)

Year	Population	Deaths (All Forms)	Death Rate (All Forms)	Deaths (Respiratory System)	Death Rate (Respiratory System)
1921	417,859	1,842	440.81	1,827	437
1931	562,866	1,431	254.23	1,319	236
1947	927,849	1,635	176.2	1,468	158.2
1948	969,713	1,682	173.5	1,449	149.4
1949	1,013,517	1,560	153.9	1,290	127.3
1950	1,059,354	1,477	139.4	1,211	114.3
1951	1,107,320	1,299	117.3	1,052	95.0
1952	1,157,518	1,206	104.2	956	82.6
1953	1,210,056	1,006	83.1	811	67.0
1954	1,265,045	964	76.2	829	65.5
1955	1,322,607	989	74.8	827	62.5
1956	1,382,857	784	56.7	673	48.7
1957	1,445,930	751	51.94	671	46.4
1958	1,514,900	919	60.66	712	47.0

TAN TOCK SENG'S HOSPITAL

432. Tan Tock Seng's Hospital continued to function as the chief Government Tuberculosis Centre. The completion of two additional ward blocks constitutes the completion of the second phase of the medical plan for the extension of the Tuberculosis Service.

433. The Assistant Nurses Hostel which was provided for in the Medical Plan for the Hospital has been deferred; one of the two new ward blocks is being converted into an Assistant Nurses Hostel and Training School.

434. Two of the four new blocks at Woodbridge Hospital were taken over in November 1958, for the accommodation of chronic infectious ambulant cases of tuberculosis. These patients were carefully selected after a short stay at Tan Tock Seng's Hospital. At the end of the year there were 38 patients.

Staff

435. The staff of the hospital consisted of 1 Senior Chest Physician (Superscale, Grade *E*), 1 Chest Physician (Superscale, Grade *G*), 3 Senior Registrars, 16 Medical Officers (Timescale), 2 Matrons Grade II, 25 Sisters, 7 Hospital Nurses, 327 Assistant Nurses, 5 Almoners, 2 Radiographers, 1 Physiotherapist,1 Occupational Therapist, 1 Pharmacist, 2 Chief Hospital Assistants, 4 Hospital Assistants (Special Grade B), 33 Hospital Assistants (Timescale), 2 Dispensing Assistants and 4 Laboratory Assistants. The Chronic Unit at Woodbridge Hospital had a Visiting Chest Physician, a part-time Medical Officer and 3 Hospital Assistants.

436. The Reverend Mother and seven Sisters of the Franciscan Missionary of the Divine Motherhood together with 53 Hospital Nurses comprised the nursing staff of the Mandalay Road Section of the Hospital.

437. The Hospital now has three units. Dr. (Miss) G. E. L. Cummins, M.B.B.CHIR. (U. Camb.), M.R.C.P. (London), Dr. Wong Hin Sun, L.M.S. (Singapore), M.R.C.P. (Edin.), and Dr. Yeoh Seang Aun, M.B.B.S. (Malaya), M.R.C.P. (Edin.), were in charge of the three units and were assisted by Dr. J. M. J. Supramaniam, M.B.B.S. (Malaya), M.R.C.P. (Edin.), F.R.F.P.S. (Glas.). Dr. H. F. Jackson, L.M.S. (Singapore) was the Acting Medical Superintendent.

438. Dr. R. J. Grove-White, M.D. (Dublin), M.R.C.P. (Edin.), Senior Chest Physician, retired on 1st April. He was associated with Tan Tock Seng's Hospital for over ten years and his retirement is a great loss to the Hospital.

Treatment

439. In-patient treatment is still essential for certain types of cases and is reckoned to be the best treatment. Infectious and acute toxic cases were given priority for admission.

440. Streptomycin, Para-amino-salicylate and Iso-nicotinic acid hydrazide, in some combination or other, are the three important drugs and treatment is now continued for a minimum of one year in most cases.

441. Cyclocerine: Report on the therapeutic trial on Cyclocerine done in the hospital was published in the *Tubercle* of August 1958. The results were encouraging in only a few cases, but the toxic manifestations were marked.

442. Kaolin Pneumoconiosis: A series of ten cases of Kaolin Pneumoconiosis were found and investigated.

443. Professor F. R. G. Heaf, Professor of Tuberculosis, Welsh National School of Medicine, Cardiff, during his short visit to Tan Tock Seng's Hospital discussed various problems regarding tuberculosis with the doctors. He emphasised on the treatment of chronic pulmonary tuberculosis with persistent cavitation and positive sputum and stressed that where the patients have failed to improve under the usual chemotherapy regime with or without collapse therapy, they should be given INAH alone in large doses. This renders the patient less infectious and the casual organism less virulent.

444. Following the report of the Edinburgh trials under Professor Crofton of the good results obtained following the use of all three anti-tuberculosis drugs (Streptomycin, INAH and PAS) on far advanced pulmonary tuberculosis cases, twenty such cases were put on this regime for one year. It is still too early to evaluate the results.

445. Cases selected for major thoracic surgery had the pre-operative preparation and post-operative follow up done at Tan Tock Seng's Hospital while the operation was done at the General Surgical Units at the General Hospital. 516 minor operations were carried out at Tan Tock Seng's Hospital, of these 279 were bronchoscopic, 1 laryngoscopic examination and 124 plaster of paris applications. No phrenic crushes or re-crushes were carried out.

446. Table 82 gives a return of tuberculosis cases admitted to Government hospitals in Singapore. Admission to hospital for in-patient treatment is made according to various priorities on medical and social grounds.

TABLE 82

TUBERCULOSIS CASES ADMITTED TO GOVERNMENT HOSPITALS

———	1954	1955	1956	1957	1958
Tan Tock Seng's Hospital:					
Pulmonary	2,137	2,104	2,061	2,442	3,064
Bones and Joints ..	35	59	79	133	171
Other forms	11	12	22	27	41
General Hospital:					
Pulmonary	686	776	944	942	785
Bones and Joints ..	240	287	146	302	338
Other forms	297	339	415	122	242
St. Andrew's Orthopaedic Hospital:					
Bones and Joints ..	170	247	104	235	245
Other forms	..	..	105	..	..
Total ..	3,576	3,824	3,876	4,203	4,886

TABLE 83

COLLAPSE THERAPY ON IN-PATIENTS AT TAN TOCK SENG'S HOSPITAL

———	1954	1955	1956	1957	1958
Artificial Pneumothorax: (in-patients)					
Inductions done ..	11	20	1	..	1
Refills done	174	136	5	..	..
Pneumoperitoneum:					
Inductions done ..	205	148	106	74	66
Refills done	6,124	5,339	2,880	1,160	769

Training

447. Nineteen student nurses passed the examination for the Tuberculosis Nursing Certificate. 38 Assistant Nurses passed the final examination during the year. 165 nurses were in training at the end of the year.

448. Two trained Assistant Nurses who were awarded the N.A.P.T. Scholarship and spent six months in the United Kingdom from March to September 1958.

TABLE 84

RETURN OF WORK, ROTARY TUBERCULOSIS CLINIC

	1956	1957	1958
New cases of Tuberculosis	1,587	2,405	2,790
Repeat visits of cases of Tuberculosis ..	173,978	269,820	364,272
Specialist Consultations:			
(*a*) New cases	2,371	2,796	3,434
(*b*) Old cases	35,500	36,751	44,474
X'ray examinations	60,170	75,973	82,682
Fluroscopic screenings	11,444	4,024	1,743
Laboratory examinations	112,731	111,420	110,447
A.P. Inductions	35	6	..
A.P. Refills	731	16	..
P.P. Inductions	860	55	24
P.P. Refills	70,142	20,826	8,586
Home visits to patients	8,887	7,609	3,037
Home visits to contacts	8,837	9,239	6,179
Tuberculin Tests	4,184	3,838	2,693
Contacts' attendance at Clinic ..	9,414	14,375	18,802

ALMONER'S DIVISION

449. This has been an interesting year and one in which trends in the department have developed along firmer lines as the staff position has become more stable. Consequently, the re-organisation which has been possible during the year has meant that the Almoner's caseloads are becoming more manageable and there has been greater opportunity for effective work within the department. Considerable time has been spent during the year in examining work methods and in promoting a more effective liaison with other departments in the hospital, with Almoner Departments in other hospitals, and with various community service organisations with whom the department is in close contact, e.g. the Department of Social Welfare.

450. During the year arrangements were made for the supervised fostering of children, especially babies born into infectious homes.

451. For some years now the hospital has been operating a scheme, known as 'The Six Months' Scheme', in which 20 of the male hospital servants and one female hospital servant, are patients who have been receiving

treatment at the hospital and who are taken on to the hospital staff for a period of six months as a rehabilitation measure when they become fit to work. The object of this scheme is that it provides temporary employment, for the patient who has no immediate avenue of work open to him. It also helps the individual to gain confidence on his own ability to stand up to a certain amount of work. As such it represents for him a stepping stone from Social Welfare allowance to more permanent employment in the community.

452. Student training has again formed an important part of the department's work this year and with a more experienced Almoner staff, it has been possible to provide training placements for five students from the Department of Social Studies, University of Malaya, during 1958.

PHYSIOTHERAPY DIVISION

453. In April 1958 there were two physiotherapists but in July 1958 because of acute staff shortage at General Hospital one was transferred there. This necessitated in cutting down of patients' treatments from individual treatments to large group exercises.

TABLE 85

SUMMARY OF WORK DONE BY THE PHYSIOTHERAPY DIVISION

Year	*Treatments*	*Patients treated*
1954	30,318	1,647
1955	26,629	1,578
1956	22,118	1,688
1957	18,357	1,523
1958	25,032	1,965

OCCUPATIONAL THERAPY

454. As in previous years, the accent in this section has been on the rehabilitation of cured and arrested tubercular individuals.

455. In addition to tailoring and dressmaking, training was given in basket making and weaving. It is hoped that on completion of training in these subjects, trainees will be able to support themselves by fulfilling orders taken on their behalf by the Occupational Therapist.

DIVERSIONAL THERAPY UNIT

456. 29 Wards are covered by 50 voluntary workers. Many new helpers are needed to cover new wards as they open up.

457. The number of articles produced during the year is the record number of 10,062. The articles comprise:—felt toys, plastic toys, flowers, sewing and embroidery, all kinds of knitted garments from babies bootees to large sweaters of elaborate design. These knitted articles will stand comparison anywhere in the world. It is hoped that the patients are finding this work remunerative when they are discharged from hospital.

RED CROSS LIBRARY

458. There is greatly increased activity and expansion of library work, as a result of which four new trolleys have had to be purchased.

459. Eleven voluntary workers kindly gave their services to run the library.

HOSPITAL SCHOOL

460. The lady teacher, who was in charge of classes for child patients since May 1956, left the service early in the year.

461. The child patients are now under the care of a voluntary worker.

ROYAL SINGAPORE CHEST CLINIC

462. The year 1958 saw the completion of another year of successful work for the Singapore Anti-Tuberculosis Association in the campaign against tuberculosis. There was a steady increase in the work of the various departments, making the year the busiest year since the inception of the Association a decade ago.

463. *Dr. G. H. Garlick.*—The Association suffered a very grievous loss in the sudden death of Dr. G. H. Garlick, who had been its Medical Director ever since the Association came into existence in 1948. It is due to the drive, the foresight and the vision of Dr. Garlick that the Singapore Anti-Tuberculosis Association has become one of the most progressive anti-tuberculosis organisations in Souh-East Asia.

464. *Diagnostic Unit.*—Case-finding is one of the most important procedures. The Diagnostic service has continued to fulfil effectively just this function. X-ray examinations done was 110,041, 11,000 more than in 1957. Of these, 108,118 were chest X-rays (including 1,242 tomograms) and 1,923 were X-rays of bones, sinuses, internal organs, etc.

465. In April 1958, the Clinic undertook to provide clinical examinations in addition to chest X-rays for school teachers requiring certificates of fitness for employment in Government Aided schools. The same service was extended in July 1958, at the request of the Seamen's Registry Board, to seamen applying for registration with that Board.

466. By the end of 1958 2,090 school teachers and 3,618 seamen had had such examinations.

467. *Treatment Unit.*—Monthly figures over the year 1958 showed a gradual increase in the volume of work during the first nine months, and a steep rise from September to the end of the year, when 919 new cases of tuberculosis were referred from the Government Mass X-ray Survey in the Chinatown area of the city.

468. The total number of new cases admitted during the year was 2,412, compared with 1,480 in 1957. An analysis of these 2,412 new cases serves to bring out the followings:—

Source	34 per cent came to the Clinic on their own initiative; 10 per cent were found by group and pre-insurance examination; 8 per cent were sent by general practitioners; 12 per cent were through other referrals and the largest group, consisting of 36 per cent of the cases admitted, came from the recently conducted Government Mass X-Ray Survey.
Sex	Males 79 per cent, Females 21 per cent.
Racial Distribution	Chinese 89 per cent, others 11 per cent.
Residence	58 per cent came from postal districts 1, 2 and 3—the areas of the City adjacent to the Clinic.
Activity of disease	87 per cent had active disease; 13 per cent were classified as doubtfully active or quiescent.
Classification	Minimal 33 per cent; Moderately advanced 40 per cent; Far advanced 15.5 per cent; Unclassified 11.5 per cent.

469. There were 225,409 attendances of patients compared with 221,855 in 1957. Of these, 30,029 (13 per cent) were attendances at the Mobile Treatment Unit at its various fixed stopping places around the City and outlying areas of the island, and 5,881 were domiciliary visits paid by the Health Sister to ill patients in their own homes. The number of attendances at the evening sessions in the Clinic, held for the benefit of office workers, rose from 9,309 in 1957 to 10,032.

470. *Surgery.*—During the year, 151 cases were accepted for operation at Government hospitals.

471. *Welfare Unit.*—The Almoner's Department had another busy year of consultation and advice to patients, investigation of contacts, follow-up of treatment defaulters, the arrangement of home-visiting and attendances at the Mobile Treatment Unit, and in addition the large volume of work required for the supervision of 1,442 Social Welfare Allowance cases.

472. Public assistance from funds set aside by the Social Welfare Department for the treatment of tuberculous patients who are eligible for public assistance have enabled the Clinic to take on all patients needing it.

473. *Rehabilitation.*—More lives are now being saved with effective treatment than ever before. The mere saving of lives, however, is not enough; the ex-tuberculous patient must be restored to a productive place in the community. The rehabilitation of the tuberculous patient has therefore continued to be an important function.

474. There has been steady increase in the number of patients receiving training in men's and ladies tailoring, weaving, printing, book-binding and boxmaking. The goods produced in our Rehabilitation Workshops have been well received by the general public.

475. At the South Winds Lee Rehabilitation Settlement about 50 ex-patients were in residence throughout the year, most of them for six months or more. They have been fully engaged in one of the occupations of the Settlement.

476. *Preventive Work.*—Propaganda and health education are vital to prevention of tuberculosis. The more the public knows about tuberculosis the greater are our chances of controlling and eventually eradicating the disease. Regular instruction of the patient and the public about the nature of tuberculosis and the means to fight it has continued both within and without the clinic. Films and talks to patients, lecture visits of school children, students and nurses, have spread direct information.

477. *Tuberculosis Insurance.*—In 1958 4,881 persons joined the Insurance Scheme and it is significant that of the applicants for admission to the scheme during the year 104 were found to have active tuberculosis. Of the 18,000 insured persons 75 developed active tuberculosis while under regular six-monthly X-ray review. A total of 141 commercial establishments have now brought their staff under the protection of the scheme, compared with 114 at the end of 1957.

478. *International Union against Tuberculosis—Eastern Regional Committee.*—The second meeting of the Eastern Regional Committee of the International Union against Tuberculosis was held in the Clinic in October. This was an important occasion which brought together representatives of Anti-Tuberculosis organisations from a number of countries in this region. Besides the valuable contacts and exchange of views afforded, the meeting confirmed the constitution of the Committee and outlined its work. Dr. Sen-Gupta was elected to serve on the Executive Committee of the Eastern Regional body.

TABLE 86

S.A.T.A. CLINIC STATISTICS FOR THE YEAR 1958

				1957	*1958*
Diagnostic Unit					
Total X-rays (including 26,161 Treatment Unit re-x-rays)				99,214	110,041
Daily average				366	404
Laboratory tests:					
Blood sedimentation				37,059	39,620
Blood counts				8,038	10,085
Mantoux tests				5,506	4,632
B.C.G.				1,271	610
Treatment Unit (Total figures)					
Total number of attendances				221,855	225,409
Daily average attendances				818	830
Total number of services rendered				468,447	471,775
Daily average services				1,728	1,737
Consultations with Physicians:					
New cases (T.B.)	2,412				
Old cases and non-T.B. ...	31,105				
	———		...	32,129	33,517
Laboratory tests:					
Sputa—direct smear ...	16,114				
culture	2,324				
	———	18,438			
Laryngeal swab cultures ...		1,711			
Other tests		12,868		29,019	33,017
Electrocardiographs				386	589
Home Visits					
Number of treatment visits by Health Sister				5,703	5,881
Average number of patients receiving home treatment throughout the year				80	86
Number of visits for investigation of income, follow-up defaulters, etc.				2,086	2,577
Mobile Treatment Unit					
Number of attendances				29,654	30,029
Number of patients served by Unit at end of year ...				435	632
Milk Bar					
Free meals served				44,554	46,832
Daily average				165	172

Chapter Sixteen

SOCIAL HYGIENE

479. Singapore is not only an International Port, but a great Military and Industrial Centre and a large island City of 1,500,000 inhabitants. There is a large sector of mobile population attracted to seek employment. The number of transients and persons afloat each day in the port of Singapore is quite considerable. The facilities provided for the control of venereal diseases include:—

(i) a 55 bedded hospital with male and female out-patient clinics;

(ii) a Seamen's Clinic in the dock area of the port of Singapore;

(iii) two mobile units for diagnosis, treatment and case-finding in rural areas;

(iv) an Epidemiological Unit for case-finding, contact and follow-up of patients; and

(v) a departmental Serological Laboratory for quick diagnosis.

Staff

480. The staff consists of 3 Medical Officers, 2 part-time Medical Practitioners, 1 Sister, 11 Nurses, 21 Hospital Assistants, 1 Senior Supervisor and 11 field workers. Dr. L. M. Ram, M.B., B.S., M.R.C.P., D.P.H., was the Senior Medical Officer, Social Hygiene.

INCIDENCE OF VENEREAL DISEASES

481. The incidence of veneral diseases in Singapore has always been judged from the Clinic admissions of new cases to the institutions of this Division, summarised for the last five years in Table 87.

Table 87

INCIDENCE OF VENEREAL INFECTIONS, 1954–58

Year	*Syphilitic Infections*	*Other V.D. Infections*	*Total*
1954	1,896	3,895	5,791
1955	1,647	3,441	5,088
1956	1,226	3,557	4,803
1957	1,276	4,176	5,452
1958	1,035	4,198	5,233

482. The clinic admission rate for 1958 was only 3.5 per thousand of population as compared to 10 per thousand for 1949. It would also appear that about 5,000 V.D. infections could be expected yearly in Singapore.

Syphilis

483. Except for a slight increase in 1957, syphilitic infections have progressively been deminishing in number for the past several years as shown in Table 88.

TABLE 88

BREAKDOWN OF SYPHILITIC INFECTIONS, 1954-58

Year	Primary Syphilis	Secondary Syphilis	Early Latent Syphilis	Late Latent Syphilis	Infantile Syphilis	Total
1954	104	39	418	943	25	1,529
1955	88	28	209	1,266	14	1,605
1956	128	41	182	650	10	1,011
1957	172	33	249	577	17	1,048
1958	125	49	168	528	8	878

484. In addition there were 25 cases of congenital syphilis above the age of 2 years and 132 cases of late symptomatic syphilis. A breakdown of the latter by nationality and sex is given in Table 89.

TABLE 89

TERTIARY SYPHILIS, 1958

Nationality	Gummata Skin	Bones and Joints	Cardio-vascular	G.P.I.	Tabes	Other Neuro Syphilis
Male:						
Chinese ..	10	16	10	14	2	40
Indian ..	2	4	4	1	..	3
Malaysians ..	1	4	2	..	..	5
Total ..	13	24	16	15	2	48=118
Female:						
Chinese ..	2	..	3	1	1	4
Indian ..	..	..	..	..	..	..
Malaysians ..	..	..	..	..	..	3
Total ..	2	..	3	1	1	7= 14
Grand Total ..	15	24	19	16	3	55=132

485. Ratio of various lesions during the last five years has been as follows:—

TABLE 90

RATIO OF VARIOUS SYPHILITIC LESIONS, 1954–58

Lesions	1954	1955	1956	1957	1958
Neuro Syphilis	35.9	40.2	40.0	43.6	56.0
Cardio-vascular	13.3	22.0	14.2	11.0	14.4
Cautaneous	22.3	18.9	18.7	22.7	11.4
Bones and Joints	28.5	18.9	27.1	22.7	18.2

486. Neuro syphilis has always been the predominating lesion of late symptomatic syphilis in the tropical island.

Gonorrhœa and Non-specific Urethrities

487. While both incidence and prevalence of syphilis has considerably declined during the last several years, the incidence of gonorrhœa and allied conditions has been steadily increasing in spite of the simplicity of treatment and the inestimable number of cases being treated by general practitioners. Clinic admissions for the last five years are shown in Table 91.

TABLE 91

INCIDENCE OF GONORRHŒA AND NON-SPECIFIC URETHRITIS, 1954–58

Year	Gonor-rhœa	Gonor-rhœa Oph-thalmia	Gonor-rhœa Compli-cations	Gonor-rhœa and Non-Urethritis	Non-specific Urethritis	Total
1954	2,454	21	14	218	424	3,131
1955	2,339	31	18	241	696	3,325
1956	2,584	54	11	240	529	3,418
1957	2,856	33	10	177	522	3,598
1958	2,808	37	6	253	804	3,908

Other Venereal Infections

488. There is still an irregular rise and fall in the incidence of soft sore. The incidence of lymphogranuloma inguinales has been steadily declining during the past several years and no case of granuloma inguinales has been reported for the last 11 years.

TABLE 92

INCIDENCE OF OTHER VENEREAL INFECTIONS, 1954–58

Year	Lympho-granuloma Venereum	Soft Sore	Mixed Infections	Granuloma Inguinale
1954	103	1,083	270	..
1955	70	822	161	..
1956	40	647	141	..
1957	33	1,056	188	..
1958	13	1,228	106	..

ROUTINE WORK

Attendances

489. The average daily attendances totalled 665 based on 297 working days of the year. Table 93 give comparative figures for the last five years.

TABLE 93

PATIENT ATTENDANCES AT SOCIAL HYGIENE DIVISION, 1954–58

Year	In-patients	OUT-PATIENTS			Total Attendances
		Males	Females	Total	
1954	2,332	19,925	9,456	29,381	162,072
1955	1,379	15,803	9,943	25,746	184,033
1956	1,353	14,596	9,955	24,551	185,452
1957	1,335	16,713	11,502	28,215	190,549
1958	1,125	19,864	14,997	34,861	197,333

Social Hygiene Travelling Dispensaries

490. There are two mobile units in operation since 1957. This facility introduced first in 1950, now covers all the main Maternity and Child Welfare Centres in the rural area, some out-patient dispensaries and clubs. The number of new cases investigated during the year was 12,330 of whom 11,448 were ante-natal cases. Tables 94 and 95 summarise the work of the units.

TABLE 94

CASES TREATED BY SOCIAL HYGIENE TRAVELLING DISPENSARY, 1958

Clinic	Male	Female	Ante-natals	V.D. Cases	Investigation Cases	Total
Central Rural:						
Yio Chu Kang						
Upper Serangoon ..						
Seletar	260	3,356	3,309	41	3,575	3,616
Paya Lebar						
Rural West:						
Bukit Timah						
Pasir Panjang						
Bukit Panjang	442	4,359	4,281	47	4,754	4,801
Holland Road						
Jurong						
Rural East:						
Kampong Batak						
Changi						
Ulu Bedok	..	3,913	3,858	37	3,876	3,913
Siglap						
Total ..	702	11,628	11,448	125	12,205	12,330

TABLE 95

ANTE-NATAL CASES EXAMINED, 1958

Nationality	Ante-natals	Primipara	Primipara Positive	Multipara	Multipara Positive
Chinese ..	7,614	1,023	12	6,591	32
Malaysian ..	2,810	407	8	2,403	30
Indian ..	948	161	2	787	1
Others ..	76	15	..	61	..
Total ..	11,448	1,606	22	9,842	63

491. For the first time in the history of Singapore the S.T.S. positivity rate of expectant mothers has fallen below 1 per cent (0.7 per cent).

Epidemiological Section

492. The staff of this section consists of a Senior Supervisor and 12 field workers, an interpreter and a clerk. The activities of this section are chiefly directed towards:—

(i) follow-up of treated cases to detect relapse or re-infection;
(ii) contact of defaulters;
(iii) screening of marital partners of the patients and their children;
(iv) contact of promiscuous women for continuous treatment and
(v) health education.

493. 14,137 home visits were made and 3,705 letters were written to various individuals during the year. There were 4,865 V.D. families under surveillance of whom 585 came under treatment for the first time in 1958. The successful contact index was about 40 per cent. 106 girls below the age of 18 were referred by the Social Welfare Department under the Women and Girls Protection Act of 1930 of whom 13 were found to be infected—on with early syphilis, eight with gonorrhœa and four with syphilis and gonorrhœa.

Antibiotic Prophylaxis

494. As a promiscuous woman has several exposures a day, it is difficult for her to escape infection. To help her for prevention and cure of the disease, she is advised to report weekly for examination and health education and treatment with P.A.M. (Penicillin Ammonium Monostearate) or Bicillin given monthly, fortnightly or weekly as the case might be. There were 129 new cases admitted during the year in this category of whom 80 were free from infection. Since the inauguration of this service in 1950, 1,333 women have been treated of whom only 405 attended during 1958 receiving an average of seven injections per person.

Dermatological Clinic

495. 22 per cent of all new cases admitted to this clinic in 1958 were suffering from skin ailments. Since 1950, diagnosis and treatment of dermatological complaints has been a regular feature of Social Hygiene Clinics and an air-conditioned room has been set apart for treatment of acute cases. Table 96 summarises the routine work done in the Social Hygiene Division for the last five years.

TABLE 96

SUMMARY OF WORK IN SOCIAL HYGIENE DIVISION, 1954–58

———	1954	1955	1956	1957	1958
Blood specimens for Kahn Test	28,892	29,452	29,315	33,400	33,983
Cerebro Spinal Fluid for Kahn Test	461	406	596	242	198
Specimen for Dark Ground Microscopic Examination ..	4,267	4,091	4,223	4,114	3,003
Smears for Examination for Gonococci	20,861	23,372	26,641	26,482	31,356
Swabs for Culture for Gonococci	356	157	110	115	134
Aqua Penicillin G. used ..	7,753 mu	4,035 mu	4,020 mu	3,540 mu	2,426 mu
Procain Penicillin P.A.M. ..	34,398 ,,	31,224 ,,	34,437 ,,	33,485 ,,	26,808 ,,
Penidure (Bicillin) ..	382 ,,	1,392 ,,	2,712 ,,	2,175 ,,	740 ,,
Total number of Injections administered	179,423	182,121	189,209	183,523	187,662

Investigation Cases

496. Due largely to health education, a great number of patients reported to the clinic for exclusion of venereal disease for a clean bill of health as well as to seek relief for alleviation of allied conditions. A breakdown of such cases for the last five years is given in Table 97.

TABLE 97

GENERAL MEDICAL WORK, SOCIAL HYGIENE, 1954–58

——	1954	1955	1956	1957	1958
Apprehensive group including ante-natal and contact cases	10,391	10,982	11,265	12,552	14,538
Dermatological complaints ..	5,412	5,587	4,711	5,538	7,613
Arthritis and Arthralgia ..	419	460	572	620	942
Non-gonococcal Urethritis, Cervicitis, Trichomonas, Infestation, Dysuria, etc. ..	942	985	869	983	1,509
Other genital infections, Balanitis, Warts, Paraphimosis, Traumatic, Ulcers, Hydroceles, Non-specific Epididymitis and sexual complaints ..	372	480	692	712	922
Yaws	65	53	30	9	15
Leprosy	24	26	16	19	27
Non-venereal Iritis, Conjunctivitis	96	108	115	136	299
Miscellaneous	483	563	1,478	2,197	3,763
Total ..	18,190	19,244	19,748	22,760	29,628

Seamen

497. Under Brussel's International Agreement of 1924, seamen of all nationalities are afforded all the facilities for free diagnosis and treatment both in Dock Area Clinic and in the Middle Road Hospital. There are about 25,000 local people employed as seamen. The number treated during the last five years has been as folows:—

1954	...	...	907
1955	...	...	1,019
1956	...	...	1,072
1957	...	...	995
1958	...	...	1,054

498. Table 98 gives the break down by nationality and disease of seamen treated in 1958:—

TABLE 98

SEAMEN TREATED AT SOCIAL HYGIENE DIVISION, 1958

——	Primary	Secondary	Tertiary	Period not indicated	Gonorrhœa	Soft Sore	Investigation Cases	Total
Chinese ..	2	3	4	8	23	9	164	213
Indian ..	2	..	1	1	5	2	15	26
Malaysian ..	..	..	..	6	10	1	38	55
European ..	..	..	..	..	50	26	669	745
Others ..	..	1	..	1	..	..	13	15
Total ..	4	4	5	16	88	38	899	1,054

499. Table 98 summarises the various types of venereal diseases treated in 1958 and the number of patients by nationality.

Teaching and Health Education

One of the primary functions of the Social Hygiene Division is the training of medical and para medical personnel. Medical students, doctors (studying for the Diploma in Public Health), nurses, midwives, almoners, hospital assistants and trainees for Social Studies receive regular training—practical and theoretical in the institutions of the Division. The field workers of the epidemiological section educate patients and the public at interviews and follow-up and hand over pamphlets in English, Chinese, Tamil and Malay to the patients and members of the public who are literate in any of these languages.

Chapter Seventeen

MATERNITY AND GYNÆCOLOGY

KANDANG KERBAU HOSPITAL

501. The Kandang Kerbau Hospital is the main Government Institution in the Colony which deals with maternity and gynæcology. This hospital is essentially a free hospital except for a small paying section, is run on a two-unit system. The University Unit is under Professor B. H. Sheares, M.D., M.S., F.A.C.S., F.R.C.O.G., Professor of Obstetrics and Gynæcology, University of Malaya, and the Government Unit is under Dr. A. C. Sinha, L.M.S., M.M.S.A., M.R.C.O.G. Dr. A. Arulanandam, L.M.S. (Singapore), the Medical Superintendent, was responsible for the administration of the hospital.

502. There was no change in the basic beds in the hospital; of 316 beds 40 are for gynæcological patients and the remainder for maternity cases. In addition, the usual ante-natal, post-natal and gynæcological clinics as well as a general out-patient clinic for women and children are available. Alterations to Block E started during the year will be completed in mid 1959 and will increase the bed-strength of the hospital to 450.

503. As the teaching hospital of the University 154 medical students attended the hospital during the year. Forty-four nurses and 40 pupil midwives received training in midwifery during the year; 35 nurses and 36 pupil midwives obtained the certificates issued by the Midwives Board.

Development Programme

504. Besides the remodelling of Block E, work on the reconstruction of the Central kitchen, boiler house and bulk stores has commenced and should be ready for occupation by the end of 1959.

Table 99

DELIVERIES IN KANDANG KERBAU MATERNITY HOSPITAL, SINGAPORE

Year	*Hospital Deliveries*	*Hospital Domiciliary Service*	*Total*
1954	20,301	—	20,301
1955	22,813	—	22,813
1956	24,940	938	25,878
1957	27,765	1,515	29,280
1958	30,146	1,578	31,724

Domiciliary Delivery Service

505. The Domiciliary Delivery Service which was established as a teaching unit in 1956 has entered its third year in 1958. During 1958 it continued to give the same services as in the previous years.

506. Medical students, trained nurses and pupil midwives continued to gain experience in the Domiciliary field. The trained nurses and pupil midwives spent eight consecutive weeks in extern practice. Medical students are rostered in turn to gain this experience as part of their training in obstetrics. In all cases students are accompanied by experienced Staff Midwives and the Service is supervised by two Staff Nurses and a Sister.

507. The training comprised of selection of suitable patients for home delivery, ante-natal care of patients in their homes, attendance at delivery and follow up during the lying-in period. Medical students received an average of two cases while trained nurses and pupil midwives students received a minimum of 15 cases each.

508. During the year 96 medical students, 46 trained nurses and 42 pupil midwives gained this experience.

509. Women who attended the ante-natal clinic are interviewed by a Staff Midwife on their first visit and the service offered is explained to them. The patients are at liberty to choose to have their babies born either at hospital or in their own homes. Hospital delivery is the choice of a vast majority, since homes are overcrowded and also because of existing beliefs which prevent the birth of the baby at home. Relatives and friends are a potent force in this regard and they have considerable influence over the mother in her choice of whether delivery should be at home or in hospital.

510. Out of 6,179 women interviewed in the ante-natal clinics only 1,854 cases were booked for home delivery.

511. In spite of the apparent lack of response, the number of women attended at delivery at the home was 1,609 of which 31 cases were re-admitted to hospital for obvious maternal or fœtal causes. This gradual increase in number indicates that the service is gaining favour steadily.

512. Including mothers and babies 487 cases were referred to doctor and treatment carried out at home by the staff. Visits to the patient's house in the ante-natal, during labour and puerperium totalled 23,797.

513. Those who choose home confinement are given ante-natal care by the Domiciliary staff as well as by the Medical Officer in the ante-natal clinic.

Domiciliary Aftercare Service

514. The Aftercare Service continues to care for a large number of hospital deliveries. 9,104 women being attended in their own homes after having been delivered in Kandang Kerbau Hospital and kept under observation for 24 hours.

515. Staff Midwives in this service paid 57,297 visits to patients in their homes giving care to them in the lying-in period.

Pædiatric Care

516. *Lying-in Wards.*—The care of infants nursed in these wards has improved. Infants requiring individual observation and treatment are nursed in the Sisters' office and are seen daily by the Pædiatric Medical Officer. Cross infection is controlled by isolation and early treatment of cases in these nurseries.

517. Supervision and examination of apparently well infants prior to discharge is inadequate. This cannot be improved with the present ratio of patients to medical staff.

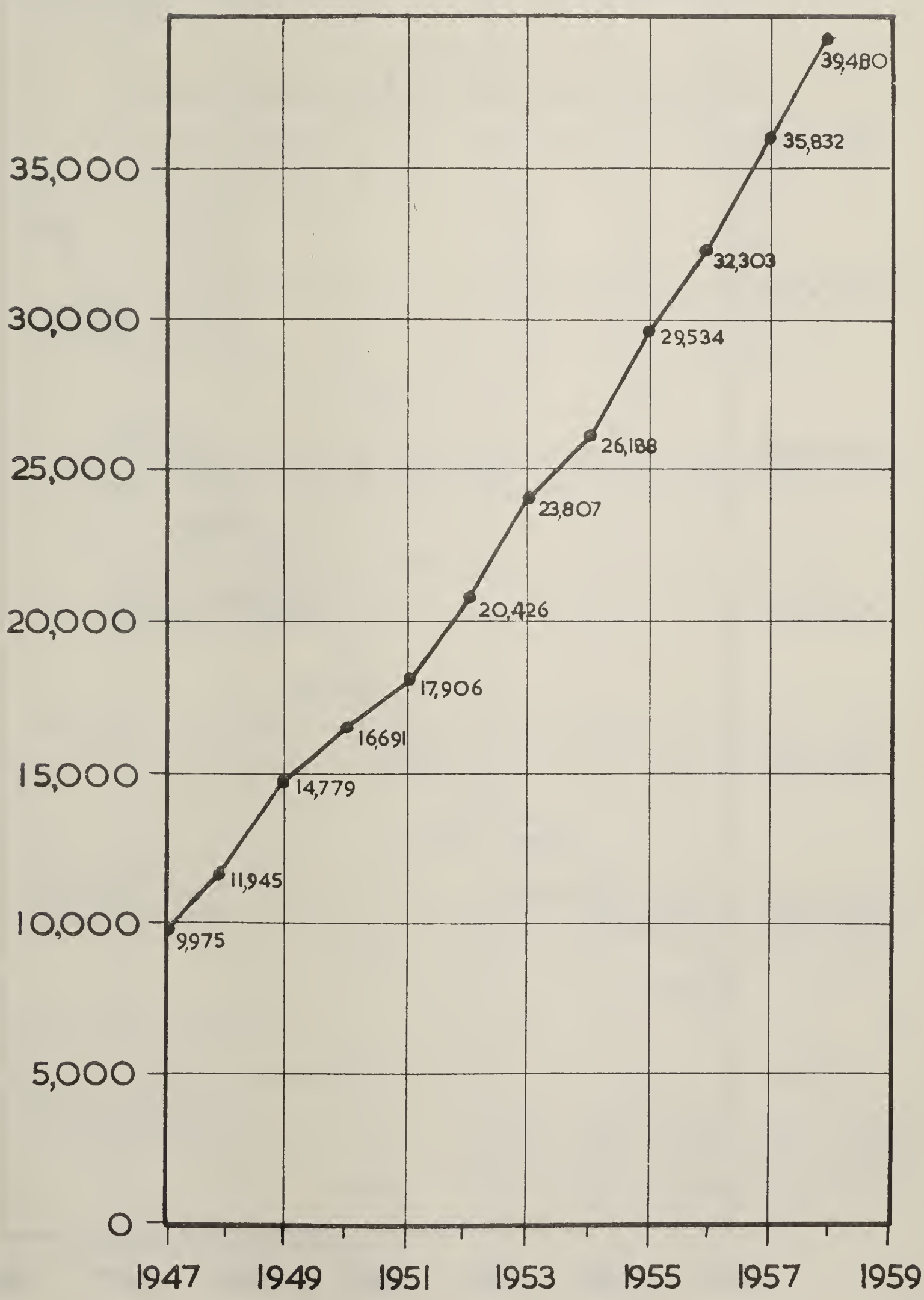
518. *Premature Nurseries.*—Incubators have been in use during the second half of the year. Only four are in use at present.

519. There has been some improvement in survival rate among the infants birth weight of less than 3 lb. The smallest infant to survive the neonatal period had a birth weight 1–14 oz.

KANDANG KERBAU HOSPITAL

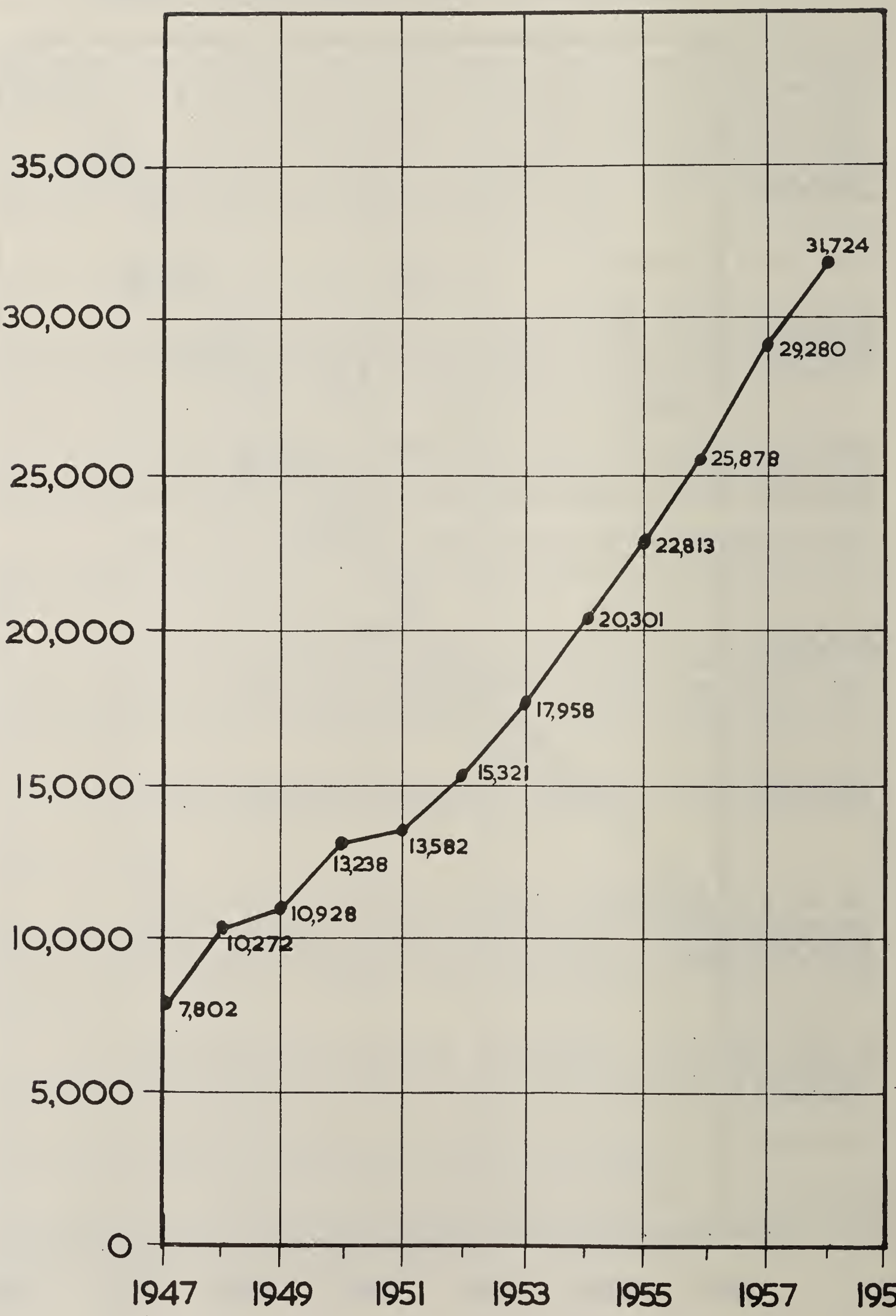
ADMISSIONS

(Maternity and gynaecologic cases)



KANDANG KERBAU HOSPITAL

DELIVERIES



520. *Infection.*—An outbreak of gastro-enteritis occurred in October 1958 due to staphyloccal infection. This was controlled quickly and there was no mortality. A cross infection with pathogenic B Coli occurred and further spread of infection necessitated temporary closure of one nursery. Infected cases were transferred to the Mistri Wing for treatment and the outbreak has been controlled.

521. *Out-patients.*—402 new cases were seen at the clinic for infants requiring care after discharge; this included cases referred from other out-patient clinics.

TABLE 100

INFANTS ADMITTED TO PREMATURE NURSERIES, 1958

Birth Weight	*Admissions*	*Deaths*	*Percentage Mortality*
Less than 2 lb.	47	45	95.9
2.0–2.7	85	71	83.5
2.8–2.15	112	75	66.0
3.0–3.7	191	86	45.0
3.8–3.15	215	55	25.6
4.0–5.8.	86	37	44.5
Over 5½ lb.	56	30	53.6
Total ...	792	399	

522. Infants of over 4 lb. birth weight are admitted only when seriously ill at birth. There is therefore a rise in mortality in the larger infants.

523. *Lodger Infants*

Admissions of premature infants not born in hospital ...	= 127
Number of deaths	= 60
Percentage Mortality	= 47.2%

TABLE 101

SUMMARY OF WORK DONE AT KANDANG KERBAU HOSPITAL, 1954–58

———	1954	1955	1956	1957	1958
Total Admissions:					
Maternity Cases	22,680	25,522	27,951	30,747	33,491
Gynæcologic Cases	3,508	4,012	4,252	5,085	5,989
Total ..	26,188	29,534	32,203	35,832	39,480
Daily average of patients	264	276	296	282	296
Maternity Statistics:					
Normal deliveries	17,181	13,614	15,058	15,840	16,742
Abnormal deliveries	3,120	9,199	9,882	11,925	13,404
Total ..	20,301	22,813	25,878*	27,765	30,146

* Includes 938 Home deliveries.

TABLE 101—*continued*

	1954	1955	1956	1957	1958
Breach deliveries	671	731	916	1,001	997
Forceps deliveries	312	396	470	563	544
Cæsarian deliveries ..	272	368	488	571	530
Triplets (sets)	6	6	3	2	4
Twins (pairs)	221	256	285	320	347
Still births	531	550	478	592	564
Born before arrival ..	337	339	307	307	364
Maternal deaths	45	53	39	37	35
Maternal deaths rate per 1,000 .	2.2	2.3	1.4	1.3	1.1
Cases cared by Domiciliary After-c.re Service (Started in May 1954) ..	a.	7,572	7,282	8,128	9,104
Domiciliary deliveries (Started in September 1955)	.	107	938	1,515	1,578
Gynæcologic Statistics:					
Gynæcologic operations (mainly hysterectomies, colporrhapies, dilatation and curettage, cautery of cervix, myomectomies and sterilization)—					
In-patient operations	3,273	3,5	3,944	4,775	5,494
Out-patient operations ..	1,161	1,34	2,774	2,815	2,873
Total ..	4,434	4,947	6,718	7,590	8,363
Gynæcologic deaths	20	22	12	13	25
Gynæcologic deaths rate percentage ..	.57	.55	.28	.26	.42
Out-patient Statistics:					
Ante-natal attendances	41,043	45,609	63,256	69,803	71,361
Gynæcologic attendances	29,403	31,220	37,074	36,430	34,200
Total ..	70,446	76,829	100,330	106,233	105,561
Post-natal Mothers	9,598	11,332	17,115	20,697	26,489
Post-natal Babies	7,832	8,450	10,484	11,993	18,202
Clinical Laboratory:					
Routine examinations	38,862	41,605	47,280	49,722	46,138
Radiologic Unit:					
Patients for Radiologic examinations ..	2,858	3,371	3,930	4,244	4,076
Radiologic examinations	2,983	3,563	4,266	4,435	4,206
Anaesthetic Unit:					
Anæsthetics administered—					
Major cases	..	..	1,414	934	1,125
Minor cases	..	..	5,138	5,731	6,786
Total ..	..	..	6,552	6,665	7,911
Number of general anæsthetics ..	..	..	6,261	6,386	7,594
Number of spinal anæsthetics ..	..	..	244	227	255
Number of local anæsthetics ..	..	..	47	52	62
Physiotherapy Section:					
Patients for physiotherapy	..	..	2,131	1,997	1,877
Physiotherapy attendances	..	..	9,724	10,066	9,674

Almoners' Division

524. Services rendered to patients during 1958 were as follows:—

	Cases
Recommended for financial aid	1,190
Arrangements for fostering	101
Arrangements for adoption	57
Cases requiring home visits	181
Arrangements for institutional care	16
Referred to Infant Welfare Clinics	85
Referred to Family Planning Association ...	31
Referred to other agencies not mentioned above ...	43
Other kinds of assistance not mentioned ...	410

Chapter Eighteen

TRAFALGAR HOME

525. Trafalgar Home is the only leprosarium in Singapore and is essentially for the segregation of infectious cases of leprosy. It is in the north-eastern part of Singapore and is about 8 miles from the city.

526. The centre has undergone great changes since its original inception at the present site in 1926, especially over the last nine years.

527. The institution is managed on the open village scheme. There are 15 wards for those requiring specialised nursing in the male and female infirmaries. There are 1,023 basic beds in the Home at the end of the year. There were 869 in-patients.

Staff

528. The staff of the Trafalgar Home consisted of 1 Medical Superintendent, 2 Resident Medical Officers, 3 Religious Nursing Sisters of the Franciscan Mission of the Divine Motherhood, 5 Hospital Assistants, 1 Staff Nurse (and 14 Nursing Aids and 30 Dressers who are in-patients of the Home). Sister Mary Phillipa, who is a Franciscan Sister, is in charge of the Rotary School. Dr. R. J. Grove-White, M.B., B.CH., M.D. (Dubin), M.R.C.P. (Edin.) acted as Medical Superintendent during the year until his departure in January 1958. From then until his resignation from Government Service in September 1958 Dr. Han Wee Fong, M.B., B.S. was the Acting Medical Superintendent when Dr. E. S. Pillay, M.B., B.S., D.T.M.H. took over.

529. There are also 270 patients employed as workers in the home. They are paid under the scheme for remuneration of in-patients introduced in 1956.

Development Programme

530. A new ward block was completed in September 1958 at a cost of $138,000. This houses on the ground floor the General Office, Dispensary, Laboratory and the Offices of the Medical Superintendent and Almoner and Lay Superintendent. The first floor has two wards—one for chronic male patients and the other for patients suffering from tuberculosis in addition to Hansen's disease.

531. The Rotary School, which was presented to the Home in 1953 by the Rotarians of Singapore, has an extension, built on Government funds at a cost of $57,000. This provides an extra six classrooms for the school which now has a total enrolment of 113 students (78 boys and 35 girls).

532. A new out-patient clinic for the care of the 3,200 out-patients was completed in September 1958 in Irrawaddy Road. This replaces the old Skin Clinic at Tan Tock Seng's Hospital.

533. Staff quarters for the Medical Superintendent, and four male nurses and a block of 16 flats for the watchmen and drivers was also completed.

TABLE 102

PATIENT STATISTICS OF TRAFALGAR HOME, 1958

	Males	*Females*	*Total*
Total Patients remaining on 31-12-57	686	251	937
Admissions from 1-1-58 to 31-12-58	198	45	243
Discharges from 1-1-58 to 31-12-58	209	77	286
Absconsions from 1-1-58 to 31-12-58	23	—	23
Transfer to other Hospitals etc., from 1-1-58 to 31-12-58	12	2	14
Transfer from other Hospitals etc., from 1-1-58 to 31-12-58	17	6	23
Deaths from 1-1-58 to 31-12-58	9	2	11
Total Patients remaining on 31-12-58 ...	648	221	869

Total patients remaining on 31-12-58*—made up as follows:—*

Males		*Females*		
Adults	*Children*	*Adults*	*Children*	*Total*
577	71	187	34	869

ADMISSIONS DURING THE YEAR 1958—CLASSIFIED BY ETHNIC CROUP

	Chinese		Indians		Malays		Europeans		Eurasians		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Adults ..	142	34	24	..	5	3	1	..	..	1	172	38	210
Children (under 18 years) ..	22	7	3	..	1	..	..	..	..	..	26	7	33
											198	45	243

ADMISSIONS DURING THE YEAR OF 1958

	Males	*Females*	*Total*
New positive cases	94	26	120
Absconded cases re-admitted	17	1	18
Boarded case became positive again re-admitted	1	—	1
Conditional discharged cases brought back because of breach of regulations ...	1	—	1
Conditional discharged cases re-admitted for treatment	1	1	2
Discharged cases from Sg. Buloh or Pulau Jerejak Leprosariums admitted—positive	3	—	3
Non-infectious cases became positive admitted—due to defaulty	2	—	2
Negative cases	79	17	96
Total ...	198	45	243

DISCHARGES DURING THE YEAR, 1958

	Males	*Females*	*Total*
Formerly positive cases discharged by Board in 1958	111	45	156
Formerly positive cases discharged by Board in previous years	22	3	25
Conditional discharges under close surveillance	6	2	8
Negative cases on Admission ...	70	27	97
Total ...	209	77	286

534. 243 cases of leprosy were admitted during the year. Of these, 120 cases were smear positive, the remainder were admitted for special reasons, e.g. for orthopædic treatment.

535. More than half the number of cases (55 per cent) admitted to the Home for the current year, had symptoms for less than a year, showing a satisfactory response from the public. Quite a proportion still come for medical attention in the late stage.

536. When a new case is registered the Health Sister and Staff checked amongst the household for contacts. This includes tuberculin testing and negative reactors to tuberculin are encouraged to have B.C.G. vaccination.

TABLE 103

STATED DURATION OF DISEASE PRIOR TO SEEKING TREATMENT

1–6 months	46 patients	55%
6 months–1 year	20 patients	
Up to 2 years	18 patients	15%
Up to 3 years	12 patients	10%
Up to 4 years	9 patients	7.8%
More than 4 years	15 patients	12.5%

Discharges

537. Cases reacting continued to take up many of the beds in the wards. The treatment used in these cases are Injection Stibophen, Cortisone, Prednisolone are being used on short and long term.

538. Response to the treatment has been good and compares very favourably with centres in other parts of the world.

539. Patients are discharged when skin smears are negative on four consecutive times, taken at intervals of one month.

540. Number of cases discharged, i.e. cases rendered smear negative:—

1954	84
1955	74
1956	94
1957	122
1958	162

TREATMENT

541. Dapsone orally, continued to be the most widely used form of treatment. Sulphetrone tablets and injection and sulphone in oil are also used.

542. In October this year a trial sample of the new drug Diphenyl thiourea (S.U. 1906) was kindly donated by Ciba in Singapore. So far 14 patients have been receiving this drug and studies are being continued on this drug.

TABLE 104

TREATMENT GIVEN TO PATIENTS, 1958

Nature of Drug	*No. of Patients*
Dapsone Tabs.	716
Dapsone in Oil	17
Dapsone Soluble (1906)	14
Sulphetrone Tabs.	31
Sulphetrone Soluble	32
Tebacyl Tabs.	1
Thacezone Tabs.	1
No Treatment (temporarily suspended) ...	57
Total ...	869

SURGICAL TREATMENT

543. During the year, cases requiring orthopædic treatment are referred to the Orthopædic Surgeon at General Hospital, Singapore. Minor surgery was done at the Home.

544. In 1958 the following operations were performed:—

Orthopædic Surgery	*Males*	*Females*
Below knee amputation	6	3
Tendon transplant foot	5	1
Arthrodesis foot	5	1
Excision of Ulcer	31	6
Tendon transplant hand	2	1
Decompression of nerves	1	—
Amputation of toes	5	—
General Surgery		
Sub-total Gastrectomy and Vagotomy ...	1	—
Appendicectomy	1	1
Minor surgery	18	1

TUBERCULOSIS

545. Every case admitted to the Home has on admission a routine X-ray of the chest. Of 120 new admissions, 17 cases were diagnosed as suffering from pulmonary tuberculosis as well. There are now in all 69 cases being treated for tuberculosis in the Home.

546. Non-infectious cases of Hansens are treated as out-patients. All of these have a routine X-ray chest, and of the 286 patients this year 14 cases were discovered to have pulmonary tuberculosis as well, and are undergoing treatment at the Tan Tock Seng's Hospital.

547. Further 25 cases already being treated for tuberculosis at Tan Tock Seng's Hospital and Singapore Anti-Tuberculosis Association were referred to us, and they were diagnosed as suffering from Hansen's disease.

ALMONER'S DIVISION

Table 105

SUMMARY OF WORK. 1958

Number of interviews in Trafalgar Home ...	4,362
Number of interviews in Skin Clinic	8,574
Number of In-patients on Social Welfare Allowances	168
Number of Out-patients on Social Welfare Allowances	400
Number of Marriages	13
Number of Births	25

OUT-PATIENTS DIVISION

548. The Health Sister, Mrs. Yeoh Siew Guat, who does the domiciliary and search for contact visits reports:—

"Patients coming for treatment at the "Skin Clinic" (Leprosy Out-patients Department) at Tan Tock Seng's Hospital have been quite regular in their attendance. Of 2,748 patients registered since 1951, 431 are entirely new cases.

Clinic hours are from 1 p.m. to 4 p.m., Mondays to Fridays. Between 1 p.m. and 2 p.m. most of the office-going patients attend.

The number of contacts who attend the Clinic during 1958 was 2,688. Contacts are asked to attend the Clinic for primary checks and again for re-checks at six monthly intervals. At first some contacts refused to attend ostensibly on grounds of having to travel long distances and entailing transport difficulty. However, it is encouraging to note that most of them turned up regularly after the need for and importance of a check-up had been explained to them.

Heaf's Multiple Puncture test on out-patients and contacts of Positive and Negative cases have been done at out-patient Department. B.C.G. is given when result of H.M.P. is negative. Both these tests have been carried on until November 1958 when the outbreak of Poliomyelitis was at it's height, this was temporarily discontinued, but it is hoped that this will be resumed in the very near future.

Lepromin Test is done only to some special cases owing to the shortage of fresh and potent stock of Lepromin.

In addition to routine contact visits, domiciliary duties of the following nature were undertaken:—

(i) Visiting old cases of defaulters.

(ii) Contacts of open cases in Trafalgar Home.

(iii) Follow up of abscondees.

(iv) Supervision of fostered babies of patients who are still in Trafalgar Home.

(v) Investigation of any special cases referred from the Almoner's Department.

During the course of the year 7,729 domiciliary visits were made".

OCCUPATIONAL THERAPY DIVISION

549. The Department was kept going by the Occupational Therapist at Tan Tock Seng's Hospital who had been trying to maintain the patients' interest by a weekly visit and the organisation of sales and the taking of orders for their work. She is assisted by an inmate worker, who visits patients regularly and supplies them with materials bought by the Department.

550. The work is carried out in the Department workshop, the wards, the infirmary blocks and the patients quarters. In November a ward was made available and the Department moved from its previous cramped quarters. In this place it is expected to equip a new workshop. The average number of patients working in the Division at one time is 50. Owing to difficulties such as the necessity for sterilising finished articles, lack of equipment and the need for work of a light nature, the arts taught are basket making, rug-making, embroidery, sewing and weaving.

551. The annual sale and exhibition was held in October at Tan Tock Seng's Hospital, the resulting total of sales amounted to $1,948 and in addition orders were taken from people attending the sale. The patients are paid for their working according to their abilities and the cost of materials used. A total of $8,182.39 was paid out in 1958, an average of $681.86 per month.

552. For some time now the Occupational Therapy Department at Tan Tock Seng's Hospital has been running a small training school for tailoring, basket making and weaving in conjunction with the Disabled Resettlement Section of the Labour Department. In May it was possible to train negative Hansen's cases in the school. The first trainee has now completed his training and is now working on orders received by the Occupational Therapist. In December two more patients commenced training in basket making and weaving. It is hoped to extend this training to more and more patients as they become eligible.

TABLE 106

ARTICLES MADE AT TRAFALGAR HOME

Basket Work	
Shopping baskets, Dhoby baskets, tiffin carriers, picnic baskets, etc.	2,496
Supplied to Public Works Department, Waste Paper baskets	1,740
Minute Paper Trays	370
Weaving	
Sets luncheon mats, scarves, etc.	50
Rug Making	
Hooked Wool Rugs	9
Sewing and Embroidery	
Table Cloths, Tray Cloths, sets luncheon mats, pairs guest towels, cushion covers	621
Candlewick	
Bathmats, chair seats, etc.	15
Total Number of Articles	5,301

Total amount paid to Hospitals Board Revenue:—	$ c.
Sales of Stores	11,726.30
Of this amount wages to Patients was ...	8,182.39

ROTARY SCHOOL

553. The school opened on 6th January. Again the school year was divided into four terms, as, both from the point of view of school work and holidays, it is more satisfactory. At the opening of the school year, there were 74 boys and 30 girls, and since January 24 boys and 5 girls have been admitted.

554. The major event of the school year has been the opening of the extension to the school, which was built by the Department of Education. The extension to the school includes a small science laboratory.

555. We are indebted to Mr. Sheriff, who, with the able assistance of Miss Wong, has run a course in tailoring for girls. This year, the senior girls have learnt how to make boys' trousers, and the juniors, dresses and blouses —taking their own measurements and drawing their own patterns.

556. The Scouts and Guides have been active; and Miss Beck has taken great interest in the Guides. The Green Cross Scout Troop with 39 boys has been run by the Chief Hospital Assistant with the assistance of Mr. Kana.

557. Sports Day, usually held in July, had to be postponed this year as the building of the new school was in progress. While it was scheduled for 18th October it had to be cancelled because of the poliomyelitis epidemic.

LEPROSY BOARD

558. The constitution of the Leprosy Board remained unchanged throughout the year. Meetings were held at Tan Tock Seng's Hospital once a month. Dr. Loh Poon Lip and Dr. V. M. S. Thevathasan besides the Medical Superintendent formed the Board.

559. Ten Leprosy Board meetings were held and 163 cases were discharged.

Chapter Nineteen

PSYCHOLOGICAL MEDICINE

WOODBRIDGE HOSPITAL

560. The progress, and development of psychological medicine that was reported in previous years has been continued during 1958. The policy of liberalising the admission, and discharge of patients, and of providing them with a wider measure of freedom while in hospital has been maintained. A larger number of patients were discharged from Woodbridge Hospital during 1958 than in previous years. This was due to the implementation of a new policy, based on modern psychiatric knowledge, that the best therapeutic agency in many instances, is the natural environment from which the patient originated, i.e. the therapeutic effect of community life, plus after-care where indicated, by the use of psychiatric out-patient clinics, rather than incarceration for long periods in a mental hospital which reduces the capacity of the patient for social re-adjustment.

Staff

561. The staff of the hospital consisted of 1 Medical Superintendent, 1 Deputy Medical Superintendent, 9 Medical Officers, 1 Psychologist, 1 Psychiatric Social Worker, 2 Pupil Social Workers, 1 Matron, 2 Assistant Matrons, 10 Nursing Sisters, 24 Nurses, 1 Senior Male Nurse, 6 Male Nurses, 24 Hospital Assistants including 16 Student Hospital Assistants, 1 Nursing Tutor, 1 Pharmacist, 1 Laboratory Assistant, 1 Male Occupational Therapist and 1 Female Occupational Therapist. Dr. E. C. Winslow was the Acting Medical Superintendent during the first 11 months of the year when Dr. B. G. Burton-Bradley, M.B., B.S., D.P.M. was appointed Medical Superintendent in December 1958.

PSYCHIATRIC OUT-PATIENT SERVICE

562. There was a general increase in the attendance at the four psychiatric clinics which were operated by Woodbridge Hospital during the year in four different areas of Singapore. This increase is an indication of the greater confidence the public has developed for this type of service.

563. Psychiatric out-patient work was done in the two prisons, and in seven of the Homes operated by the Social Welfare Department. This work was done among juvenile delinquents, orphans and misplaced children in need of care and protection, young prostitutes under rehabilitation, elderly men and women, and among mentally defective children.

TABLE 107

OUT-PATIENT STATISTICS OF PSYCHIATRIC OUT-PATIENT DEPARTMENTS

Sex	Psychiatric Out-patient Department General Hospital	Psychiatric Out-patient Clinic Paya Lebar	Psychiatric Out-patient Clinic Kallang	Psychiatric Out-patient Clinic Bukit Timah	Total	Percentage of Total
Total Number of Patients Examined and treated in 1958						
Male	1,280	497	427	262	2,466	47.72
Female	1,332	737	402	231	2,702	52.28
Total ..	2,612	1,234	829	493	5,168	100.00
Distribution by Race						
Chinese	2,114	1,030	727	404	4,275	82.72
Indian	310	104	42	55	511	9.89
Malays	98	27	52	15	192	3.72
Eurasian	34	49	..	19	102	1.97
European	12	7	1	..	20	.39
Other Asians	44	17	7	..	68	1.31
Total ..	2,612	1,234	829	493	5,168	100.00
Distribution by Age Group						
0—10 Years	34	49	16	..	99	1.92
11—20 ,, ...	371	166	142	51	730	14.13
21—30 ,, ...	988	479	280	213	1,960	37.93
31—40 ,, ...	676	350	194	108	1,328	25.70
41—50 ,, ...	318	119	133	50	620	11.97
51—60 ,, ...	180	47	61	62	350	6.77
61—70 ,, ...	37	10	3	9	59	1.15
71—80 ,, ...	8	14	..	..	22	.43
81—90 ,, ...	..	..	..	..	..	..
91—100 ,, ...	..	..	..	..	..	..
Total ..	2,612	1,234	829	493	5,168	100.00

TABLE 107—*continued*

Diagnosis	Psychiatric Out-patient Department General Hospital	Psychiatric Out-patient Clinic Paya Lebar	Psychiatric Out-patient Clinic Kallang	Psychiatric Out-patient Clinic Bukit Timah	Total	Percentage of Total
Distribution by Diagnosis						
Psychoses:						
Schizophrenic Disorders (Dementia præcox) ..	684	432	357	181	1,654	32.00
Manic Depressive Reaction	105	32	39	16	192	3.72
Involutional Melancholia ..	16	8	17	..	41	.79
Paranoia and paranoid States	5	9	10	..	24	.46
Senile psychoses ..	20	17	25	13	75	1.45
Other and unspecified psychoses	489	284	141	103	1,017	19.68
Psychoneuroses and Disorders of Personality:						
Hysterical Reaction ..	27	6	..	..	33	.64
Neurotic Depressive Reaction	706	84	66	28	884	17.11
Alcoholism	16	..	..	..	16	.31
Other Drug Addictions ..	1	..	..	..	1	.02
Other and unspecified Psychoneurotic Reaction and Disorder of Personality ..	166	164	71	83	484	9.37
Mental Deficiency:						
Other and unspecified Mental Deficiencies	304	195	101	69	669	12.95
Observation N.Y.D. ..	73	3	2	..	78	1.50
Total ..	2,612	1,234	829	493	5,168	100.00

TABLE 107—*continued*

Diagnosis	Psychiatric Out-patient Department General Hospital	Psychiatric Out-patient Clinic Paya Lebar	Psychiatric Out-patient Clinic Kallang	Psychiatric Out-patient Clinic Bukit Timah	Total	Percentage of Total
Distribution by Sources of Referral						
Patients Referred by						
Almoners	27	1	..	1	29	.56
Business Houses	..	..	..	..	..	..
City Council	15	6	1	..	22	.43
Children's Aid Society	7	..	..	1	8	.15
Female Out-Patient Department	260	..	..	..	260	5.03
General Practitioners	126	6	2	2	136	2.63
H.M. Services	..	..	..	..	..	..
Male Out-Patient Department	340	2	..	..	342	6.62
Medical Officers i/c Officials	69	..	5	..	74	1.43
Old cases under Out-patient treatment (Repeat cases)	795	1,009	651	438	2,893	55.98
Other specialist	..	..	..	..	..	..
Other Hospitals	9	..	..	..	9	.17
Police	4	3	..	..	7	.14
Prisons and Courts	..	..	..	..	..	..
Social Welfare Department	15	..	..	..	15	.29
S.A.T.A.	5	..	..	..	5	.10
School Clinics	..	..	..	..	..	..
Tan Tock Seng's Hospital	26	..	..	..	26	.50
Wards of the General Hospital	..	..	..	..	..	..
Relatives	18	54	27	7	106	2.05
Woodbridge Hospital	896	153	143	44	1,236	23.92
Total	2,612	1,234	829	493	5,168	100.00
Distribution by Disposals						
Admitted to Woodbridge Hospital	92	8	..	5	105	2.03
Advice to Medical Officers on Treatment	430	..	..	..	430	8.32
General Practitioners	..	4	..	..	4	.08
No action required	..	..	..	..	..	..
Out-patient Therapy	1,895	1,220	826	486	4,427	85.66
Observation as Out-patients	..	..	..	..	..	..
Referred to Almoner	27	1	..	1	29	.56
Referred to Social Welfare Department	15	..	..	..	15	.29
Referred to other Specialist	..	..	..	..	..	..
Referred to General Hospital Wards	153	1	3	1	158	3.06
Total	2,612	1,234	829	493	5,168	100.00

IN-PATIENTS

564. Table 108 shows that there has been a decrease of admissions, and an increase of discharges during 1958 as compared with the previous year. This has been due to the new policy during the year to treat minor psychiatric ailments at the out-patient psychiatric clinics where possible, and to discharge and rehabilitate recovered and improved patients in the better psychological atmosphere of their own homes rather than to attempt their rehabilitation, and social re-adjustment within the atmosphere of a mental hospital.

TABLE 108

ADMISSIONS AND DISCHARGES FROM WOODBRIDGE HOSPITAL, 1954–58

	1954	*1955*	*1956*	*1957*	*1958*
Male patients admitted ...	808	876	1,042	1,062	933
Male patients discharged ...	647	821	896	826	1,228
Female patients admitted ...	453	557	690	791	619
Female patients discharged ...	404	447	636	714	872

565. Comparison of admissions and discharges for the years 1954–57 showed a tendency for the total hospital population to steadily increase from year to year. The inception of the new policy for admissions, and discharges during 1958 resulted in a fall in the total hospital population from 2,269 patients on 31st December, 1957 to 1,643 patients on 31st December, 1958.

566. This is a welcome feature as it has resulted in better psychiatric and nursing care being made available to a smaller number of patients who were really in need of in-patient treatment.

567. Greater freedom has been permitted to patients, and where possible, patients were permitted to wear their own clothing. A new feature in 1958 was the substitution of wearing apparel in various coloured floral designs in place of white calico for female patients.

568. Male and female wards have continued to be classified in the following three categories:—

(i) wards which are never closed;

(ii) wards which are closed at night;

(iii) wards which have to be always closed.

569. A new feature for 1958 was the creation in November of a Department of Social Therapy under the Psychiatric Social Worker. This department will, when fully-developed provide facilities for a canteen service, indoor games, group-singing, group discussions, individual discussions, group-dancing, stage and cinema shows, and for music from a radiogram.

570. This department is for patients of both sexes, but for females there will also be a cosmetics unit which will teach patients on methods of hair-styling, and facial make-up. Newspapers, and magazines will also be available in this department.

571. Details of in-patients statistics are given in Tables 109 to 112.

TABLE 109

IN-PATIENT STATISTICS OF PATIENTS RECEIVING SPECIAL TREATMENTS OR ATTENTION

	Male	*Female*	*Total*
Number of patients receiving E.C.T. ...	1,553	3,533	5,086
Number of E.C.T. Treatments given ...	8,815	21,400	30,215
Number of G.P.I. Patients in hospital on 31-12-58	138	21	159
Number of G.P.I. admitted from 1-1-58 to 31-12-58	16	5	21
Number of patients suffering from Syphilis admitted from 1-1-58 to 31-12-58 ...	12	8	20
Number of Neurosyphilitic Courses given from 1-1-58 to 31-12-58	124	9	133
Number of Anti-Syphilitic Courses given from 1-1-58 to 31-12-58	78	6	84
Number of patients suffering from Syphilis in Hospital on 31-12-58	34	44	78
Number of Epileptics in Hospital on 31-12-58	11	16	27
Number of patients discharged after E.C.T.	1,049	745	1,794
Number of patients suffering from G.P.I. discharged from 1-1-58 to 31-12-58 ...	47	12	59
Number of patients suffering from Syphilis discharged from 1-1-58 to 31-12-58 ...	1	7	8
Number of patients suffering from Epilepsy discharged from 1-1-58 to 31-12-58 ...	6	6	12
Number of Retarded patients (M.D.) ...	80	78	158
Number of patients with Pulmonary Tuberculosis	135	61	196
Number of patients with Leprosy ...	2	1	3

TABLE 110

CASUALTIES IN MALE AND FEMALE WARDS, 1958

	Male Patients	*Female Patients*	*Total*
Wounds inflicted by other patients ...	116	163	279
Wounds inflicted by accidents	107	246	353
Wounds self-inflicted	19	82	101
Patients with suidical tendencies ...	37	21	58

TABLE 111

INSULIN SHOCK THERAPY

	Male Patients	*Female Patients*	*Total*
Number of patients treated	75	68	173
Number of patients still under treatment ...	11	5	16
Number of patients discharged ...	62	60	122
Number of patients still in hospital ...	1	3	4
Total number of treatments given ...	3,565	2,980	6,545
Total amount of insulin used (in units) ...	1,063,486	793,600	1,857.086
Deaths	1	Nil	1

TABLE 112

SECLUSION OF PATIENTS, MALE AND FEMALE

Total number of male patients in seclusion	...	Nil
Total number of female patients in seclusion	...	Nil
Total number of hours in seclusion ...	...	Nil

572. Investigations done by the Division of Psychology are given in Table 113.

TABLE 113

INVESTIGATIONS DONE IN THE DIVISION OF PSYCHOLOGY, 1958

Assessment of Social and Psychological factors as an aid to training, disposal and re-settlement	...	104
Assessment of personality make-up ...	...	72
Diagnosis and differential diagnosis ...	...	75
Vocational and educational guidance ...	...	51
Assessment of general ability and special aptitudes ...		60
Total ...		362

PSYCHIATRIC SOCIAL WORK

573. The Department of Psychiatric Social Work had a staff of one Psychiatric Social Worker, and two Pupil Social Workers. These workers carried out investigations of the case histories, and assisted in the after-discharge emplacement of 928 patients during 1958.

OCCUPATIONAL, RECREATIONAL AND DIVERSIONAL THERAPY

574. Carpentry work, repair work, painting and varnishing, basketry, rug making, soft and wooden toy making, artificial flower making, fine needle work, and raffia work were engaged in. A summary of the work in the male and female Occupational Therapy Departments, in the Tailoring Sections, in the Laundry, and in farms and gardens are given in Table 114.

TABLE 114

WORK DONE IN OCCUPATIONAL, RECREATIONAL AND DIVERSIONAL THERAPY

Articles made, repaired, or repainted in the Male and Female Occupational Therapy Departments	8,124	
Articles made and mended in the Male and Female Tailoring Sections	23,601	
Items handed in the Laundry	855,744	
Hospital Farm Production	125,415	lb.

FORENSIC PSYCHIATRY

575. There were in this hospital on the 31st December, 1958, 83 male and 29 female patients who had been sent here by the various courts, by the local prisons, or by order of the Chief Secretary to be detained here either for mental observation or for treatment of their psychiatric conditions.

576. Their offences against the law were various, and included murder, manslaughter, and causing grievous hurt, attempted suicide and vagrancy amongst the offences.

577. The courts regularly send accused persons to Woodbridge Hospital for varying periods of from one to four weeks for mental observations, and the officers of this hospital provide the courts with psychiatric reports on these persons. These reports have been of value to the courts in determining future action in regard to these accused persons, and officers from this hospital also frequently appear before the courts to give expert oral evidence.

TEACHING

578. A course in Psychological Medicine was given to the Medical Officers of this Hospital throughout the year. This course consisted of lectures, demonstrations, and clinical discussions as follows, and was aimed at preparing them for higher examinations in Psychological Medicine:—

Psychiatry	...	...	20 lectures.
Psychology	...	...	20 lectures.
Neuropathology	...	...	9 lectures—demonstrations.
Clinical Neurology	...	...	12 attendances at Neurological Clinics in General Hospital.
Clinic Psychiatry	...	...	12 Clinical Conferences in Woodbridge Hospital.

579. The School of Psychiatric Nursing at Woodbridge Hospital was during the year, granted reciprocal recognition by the General Nursing Council of England and Wales. A total of 22 nurses and student nurses, and 23 male nurses and student male nurses were receiving training in psychiatric nursing in this school at the end of this year.

580. Fifteen students of the Social Studies Department of the University of Malaya were given practical training in this Hospital in Psychiatric Social Work during the year. A course of nine lectures and lecture demonstrations in Psychiatry was given to final year medical students of the University of Malaya. A course of nine lectures and lecture demonstrations in Psychiatry was given to post-graduate students of the University of Malaya attending the Course for the Diploma in Public Health.

Chapter Twenty

INFECTIOUS DISEASE

MIDDLETON HOSPITAL

581. Middleton Hospital is the only institution specifically reserved for infectious diseases in the Colony apart from the Quarantine Station. The hospital admitted 3,679 cases in 1958 compared with 3,662 in 1957. The principal conditions dealt with during the year are given in Table 115.

Staff

582. The staff of the hospital consisted of 1 Medical Superintendent, 1 Resident Medical Officer, 7 Nursing Sisters, 20 Nurses, 27 Assistant Nurses and 6 Hospital Assistants. Dr. V. M. S. Thevathasan, L.M.S., D.P.H. was the Acting Medical Superintendent until May 1958 when he was relieved by Dr. Leong Kwok Wah, M.B., B.S.

Table 115

DISEASES DEALT WITH IN MIDDLETON HOSPITAL, 1958

Diseases	Remaining 31–12–57	Admitted	Discharged	Transferred	Died	Remaining 31–12–58
Chickenpox	13	472	485	..	..	..
Chickenpox/Broncho Pneumonia	..	1	..	..	1	..
Diphtheria	38	548	529	1	34	22
Diphtheria Carriers ..	6	315	313	..	..	8
A.A. Poliomyelitis (Paralytic) ..	20	390	139	113	12	146
A.A. Poliomyelitis (non-paralytic)	..	11	11	..	..	..
Post Poliomyelitis	..	3	3	..	..	..
Typhoid Fever	11	127	129	1	4	4
Post Diphtheritic Paralysis ..	..	2	2	..	..	..
Measles	4	310	313	..	..	1
Measles/Broncho pneumonia ..	..	44	34	..	10	..
Measles/Gastro-enteritis ..	..	4	2	..	2	..
T.B. Meningitis	..	7	7	..	..	..
Mumps	..	43	43	..	..	..
Whooping cough	..	38	37	..	1	..
Amœbic Dysentery	2	156	156	..	2	..
Bacillary Dysentery (Flexner) ..	1	37	38	..	..	..
Bacillary Dysentery (Sonne) ..	..	23	23	..	..	..
Clinical Dysentery	2	92	93	..	1	..
Rubella	..	7	7	..	..	..
Transverse Myelitis	..	3	1	1	1	..
Erysipilas	..	1	1	..	..	..
Encephalitis	..	10	5	1	4	..
Malaria S.T.	..	1	1	..	..	..
Ascariasis	..	6	6	..	..	..
Scrub Typhus	..	1	1	..	..	..
Pulmonary Tuberculosis ..	..	7	4	3	..	..
Hemiplegia Right	..	2	2	..	..	..
Vincent's Angina	..	2	1	..	1	..
Influenza	..	40	39	..	1	..
Mental Difficiency/Clinic Dysentery	..	1	..	..	1	..
Stomatitis	..	2	1	1	..	..
Observation/Carriers/ Other Diseases	4	973	947	13	8	9
Total ..	101	3,679	3,373	134	83	190

583. During the year there were 3,679 admissions with 83 deaths a mortality rate of 2.27 per cent.

DANGEROUS INFECTIOUS DISEASES

584. There were no cases of smallpox, cholera or plague.

TABLE 116

DIPHTHERIA ADMISSIONS AND DEATHS FOR THE LAST 10 YEARS

——	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Admissions ..	220	222	370	427	332	345	460	552	712	548
Deaths ..	42	28	91	80	47	34	41	47	58	34
Mortality Rate	19.09%	12.61	24.59	18.73	14.15	9.86	8.91	8.51	8.14	6.20%

TABLE 117

MONTHLY DIPHTHERIA ADMISSIONS AND DEATHS FOR THE YEAR

——	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Admissions ..	76	53	60	25	36	46	48	43	40	53	38	30	548
Deaths ..	3	1	6	..	5	3	1	7	2	3	1	2	34

585. During the year the number of diphtheria admissions remained at a high level. 548 cases of diphtheria were admitted with 34 deaths, a mortality rate of 6.20 per cent, the lowest on record. Six cases died within 24 hours after admission. 64 cases required tracheotomy operation of which 15 died. In addition there were 315 cases of diphtheria carriers.

TABLE 118

REGIONAL DISTRIBUTION OF DIPHTHERIA ADMISSIONS BY MONTH

——	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Urban ..	65	47	49	17	31	39	40	40	33	42	29	26	458
Rural ..	11	6	11	8	5	7	8	3	7	11	9	4	90

TABLE 119

DIPHTHERIA ADMISSIONS AND DEATHS BY AGE AND SEX GROUP

Age Group	ADMISSIONS		Total Admissions	DEATHS		Total Deaths
	Male	Female		Male	Female	
Under 1 year ..	21	16	37	3	..	3
1 year ..	24	27	51	2	8	10
2 years ..	39	28	67	2	2	4
3 years ..	40	31	71	2	2	4
4 years ..	28	26	54	5	3	8
5 years ..	18	26	44	..	1	1
6—10 years ..	73	83	156	1	2	3
11—14 „ ..	19	16	35	..	1	1
15—19 „ ..	10	3	13	..	..	..
20+	5	15	20	..	..	..
Total ..	277	271	548	15	19	34

TABLE 120

DIPHTHERIA ADMISSIONS AND DEATHS BY ETHNIC GROUP

Nationality	ADMISSIONS		Total	DEATHS		Total
	Male	Female		Male	Female	
Europeans ..	2	..	2	..	..	..
Eurasians ..	2	..	2	..	..	..
Chinese ..	256	242	498	15	18	33
Indians ..	5	15	20	..	..	..
Malays ..	8	11	19	..	1	1
Others ..	4	3	7	..	..	..
Total ..	277	271	548	15	19	34

TABLE 121

DIPHTHERIA: TYPE OF CASES

Type	*Admissions*	*Deaths*
Laryngeal	134	28
Nasopharyngeal	45	—
Faucial	323	6
Nasal	42	—
Aural	4	—
Total ...	548	34

TABLE 122

DIPHTHERIA: ADMISSIONS DEATHS, AND TRACHEOTOMY OPERATIONS

Total Admissions	548
Total Deaths	34
Case Mortality rate	6.20%
Number of tracheotomies done	64
Number of deaths after tracheotomy ...	15

Poliomyelitis

586. There were 404 admissions during the year of which 393 were paralytic and 11 non-paralytic. Three cases of post-poliomyelitis were admitted. The case fatality rate was low. There were 12 deaths, a mortality rate of 2.97 per cent.

TABLE 123

POLIOMYELITIS ADMISSIONS AND DEATHS FOR LAST 10 YEARS

——	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Admissions ..	68	81	78	50	41	71	19	29	52	404
Deaths ..	2	10	8	8	5	2	2	..	5	12

TABLE 124

POLIOMYELITIS ADMISSIONS AND DEATHS BY MONTH

——	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Admissions ..	1	..	1	1	1	2	1	7	33	174	116	67	404
Deaths ..	..	..	..	..	..	..	..	..	..	5	4	3	12

TABLE 125

REGIONAL DISTRIBUTION OF POLIOMYELITIS CASES BY MONTH

——	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Urban ..	1	..	1	1	1	1	..	6	21	127	82	37	278
Rural ..	..	..	..	..	..	1	1	1	12	47	34	30	126
Total ..	1	..	1	1	1	2	1	7	33	174	116	67	404

TABLE 126

AGE GROUPS, ETHNIC GROUPS, AND SEX OF POLIOMYELITIS CASES

Age Group	Europeans		Eurasians		Chinese		Indians		Malays		Others		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year ..	..	..	..	..	28	26	5	7	5	5	..	..	38	38
1 year ..	..	..	..	..	32	27	3	1	2	1	..	1	37	30
2 years ..	..	..	..	..	49	40	7	6	7	7	1	..	64	53
3 ,, ..	..	..	1	..	29	14	3	2	..	2	2*	2	35	20
4 ,, ..	..	..	..	..	8	5	2	..	..	..	..	1	10	6
5 ,, ..	..	..	..	..	6	6	..	..	..	..	..	..	6	6
6—10 ,, ..	..	..	..	..	10	9	3	1	1	2	..	..	14	12
11—14 ,, ..	..	..	..	2	4	1	..	..	..	..	..	..	4	3
15—19 ,, ..	1	..	..	..	3	..	..	..	..	..	..	..	4	..
20+	2	..	..	..	12	5	1	1	2	..	1†	..	18	6
Total ..	3	..	1	2	181	133	24	18	17	17	4	4	230	174

* Javanese. † Australian.

TABLE 127

POLIOMYELITIS ADMISSIONS AND DEATHS BY ETHNIC GROUP

	Admissions	*Deaths*
Europeans	3	—
Eurasians	3	—
Chinese	314	11
Indians	42	1
Malays	34	—
Javanese	5	—
Australian	1	—
Others	2	—
Total ...	404	12

587. The major feature of the year was the largest outbreak of poliomyelitis in the history of Singapore. It started in late August, reached its peak in October, and had subsided by the end of December. There were 7 cases from January to July, 7 in August, 33 in September, 174 in October, 116 in November and 67 in December. At the height of the outbreak, there were as many as 30 admissions daily for suspected poliomyelitis. The extensive publicity given to the outbreak in the press and radio, resulted in any child with the slightest pain or limp or alleged weakness in the limbs being sent immediately to the hospital. This threw a great strain on the resources of the hospital. A special study of the various features of the poliomyelitis epidemic is now being undertaken.

588. *Stool Culture for Poliomyelitis Virus.*—This was carried out by Professor Hale in the Department of Bacteriology, University of Malaya. Of a total of 473 specimens (including specimens from suspected cases which later proved to be not poliomyelitis). 257 were negative and 216 were positive as follows:—

Type I Poliomyelitis virus	187	
Attenuated Type II (post—Sabin) ...	1	
Type I and attenuated Type II	—	
Poliomyelitis virus (post—Sabin) ...	2	
Type III	1	(admitted 3-1-58)
Echo	7	
Coxsackie	2	
Enterovirus other than poliomyelitis but (untyped)	11	
Awaiting typing	5	
	216	

589. It was shown early in the outbreak that a Type I Virus was responsible. This was confirmed by subsequent routine stool culture. In 20 cases, an enterovirus other than the poliomyelitis virus was isolated.

590. *Non-Poliomyelitis Cases.*—In addition to the poliomyelitis cases, a large number (242) of cases of diverse actiology were referred to the hospital by doctors for suspected poliomyelitis. The commonest cause of confusion were cases of influenza, rheumatic arthritis and myalgia. Other cases were encephalitis, tuberculous meningitis, transverse myelitis, mumps, rubella, malaria, cerebral embolism, chorea, broncho-pneumonia, bronchitis, acute

rheumatism, periphalal neuritis, abscesses of thigh and leg, hysteria, bursitis, serum sickness, gastrœnteritis, malnutrition post-measles debility, congenital syphilis,whooping cough, pulmonary tuberculosis, beri-beri, pleural effusion, ulcer of scalp, pneumonitis, urticaria, epilepsy, Parkinsonism, carcinoma of pancreas and congenital heart disease.

TABLE 128

OTHER DISEASES

Other Diseases	Remaining 31–12–57	Admitted 1958	Discharged	Transferred to hospitals	Died	Remaining 31–12–58
Acute Tonsillitis	1	138	138	..	..	1
Acute Laryngitis	..	16	16	..	..	..
Acute Nasopharyngitis ..	..	8	8	..	..	..
Acute Bronchitis	..	6	6	..	..	..
Pyrexia of Unknown origin ..	1	126	127	..	..	..
Rheumatic Fever	..	2	2	..	..	..
Rheumatoid Arthritis ..	..	9	9	..	..	..
Gastritis	..	4	4	..	..	..
Gastro-enteritis and Colitis ..	2	32	33	..	1	..
Appendicitis	..	2	2	..	..	..
Nasopharyngeal Carcinoma ..	..	1	..	..	1	..
Lobar Pneumonia	..	5	3	..	2	..
Hæmorrhoids	..	3	3	..	..	..
Anæmia	..	1	1	..	..	..
Amœbic Hepatitis	..	1	1	..	..	..
Infective Hepatitis	..	1	1	..	..	..
Pyelitis	..	1	1	..	..	..
Polyneuritis	..	3	3	..	..	..
Dermatitis	..	2	2	..	..	..
Ulcer of Palate	..	6	6	..	..	..
Ulcer Intestinal	..	1	..	..	1	..
Pharyngeal Ulcer	..	1	1	..	..	..
Adenitis	..	2	2	..	..	..
Radial Nerve Paralysis ..	..	1	1	..	..	..
Ludwig's Angina	..	1	1	..	..	..
Myalgia	..	6	6	..	..	..
Subarachoid Hæmorrhage ..	..	1	1	..	..	..
Cerebral Hæmorrhage ..	..	1	..	..	1	..
Cardiac Failure/Malnutrition ..	..	1	..	..	1	..
Impetigo	..	6	6	..	..	..
Malnutrition	..	1	1	..	..	..
Typhoid Carriers	..	364	364	..	..	..
Endocarditis	..	1	1	..	..	..
Liver Abscess	..	1	1	..	..	..
Carcinoma (Pancreas) ..	..	1	..	1	..	..
Congenital Heart Disease ..	..	2	1	..	1	..
Congenital Syphilis	..	1	1	..	..	..
Epilepsy	..	1	1	..	..	..
Asthmatic Bronchitis ..	..	1	1	..	..	..
Osteitis of Hip	..	1	1	..	..	..
Hyperemesis Gravidarum ..	..	1	1	..	..	..
Carried forward ..	4	763	757	1	8	1

TABLE 128—*continued*

Other Diseases	Remaining 31–12–57	Admitted 1958	Discharged	Transferred to hospitals	Died	Remaining 31–12–58
Brought forward ..	4	763	757	1	8	1
Hysteria	..	1	1	..	..	..
Menopausal Syndrome ..	..	1	1	..	..	..
Bursitis	..	1	1	..	..	..
Allergic Rash	..	1	..	1	..	..
Drug Rash	..	4	4	..	..	..
Parkinsonism	..	1	1	..	..	..
Pneumonitis	..	1	1	..	..	..
Chorea (rheumatic)	..	1	1	..	..	..
Pleural Effusion	..	3	2	1	..	..
Beri-Beri	..	1	1	..	..	..
Abscess of thigh	..	4	4	..	..	..
Bronchopneumonia ..	..	4	4	..	..	..
Nothing abnormal detected ..	..	2	2	..	..	..
Urticaria	..	1	1	..	..	..
Scalp ulcers	..	1	1	..	..	..
Thrush	..	3	3	..	..	..
Observation	..	180	162	10	..	8
Total ..	4	973	947	13	8	9

TABLE 129

TYPHOID FEVER—ADMISSIONS AND DEATHS BY ETHNIC GROUP

Nationality	0—10		11—19		20 plus		Total	
	M.	F.	M.	F.	M.	F.	M.	F.
Eurasians ..	..	..	..	..	1	..	1	..
Chinese ..	16 (1)	8 (1)	20	10	18 (1)	17	54 (2)	35 (1)
Indians ..	..	1	2	..	5	2	7	3
Malays ..	6	2 (1)	5	2	5	4	16	8 (1)
Others ..	..	..	..	..	3	..	3	..
Total ..	22 (1)	11 (2)	27	12	32 (1)	23	81 (2)	46 (2)

Deaths in Brackets.

TABLE 130

TYPHOID FEVER—ADMISSIONS AND DEATHS BY MONTH

——	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Admissions ..	10	8	15	16	16	8	14	13	12	10	..	5	127
Deaths ..	1	..	1	..	..	..	..	..	..	2	..	..	4

591. 127 cases of typhoid fever were admitted with 4 deaths. Of these there were 4 imported cases among seamen (2 Chinese, 1 Scot. and 1 Japanese). 25 cases were from the rural area. Three cases occurred in one household at Jalan Melayu but it was not possible to trace the source of infection.

592. A total of 364 persons employed by various ice cream manufacturers and dairy farms were investigated for the typhoid carriers state. Four were found to be carriers.

Chickenpox

593. 473 cases of chickenpox were admitted during the year. There was one fatality in a Chinese girl, aged 2 years with broncho-pneumonia.

594. During the height of the poliomyelitis outbreak in October, admission of chickenpox cases was stopped, after consultation with the Director of Medical Services, due to an acute shortage of accommodation and staff.

TABLE 131

CHICKENPOX—AGE, SEX AND ETHNIC GROUPS

——	0—10		11—19		20 plus		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	
Eurasians	4	..	3	..	5	2	12	2	14
Chinese	41	33	22	9	21	8	84	50	134
Indians	35	27	29	8	114	14	178	49	227
Malays	12	11	15	4	21	4	48	19	67
Others	11	3	4	2	10	..	25	5	30
Total ..	103	74	73	23	171	28	347	125	472

595. As in previous years, male adult Indians formed the largest single group of cases.

TABLE 132

CHICKENPOX—REGIONAL DISTRIBUTION BY MONTH

——	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Urban ..	68	45	80	54	34	32	20	27	32	17	..	..	409
Rural ..	14	3	14	7	4	4	1	4	5	7	..	..	63
Total ..	82	48	94	61	38	36	21	31	37	24	..	..	472

TABLE 133

DYSENTERY

Type of Dysentery		*Admissions*	*Deaths*
1. Amœbic Dysentery		156	2
2. Bacillary Dysentery	(*a*) Flexner ...	37	—
	(*b*) Sonne ...	23	—
3. Clinical Dysentery		92	1
Total ...		308	3

TABLE 134

ADMISSIONS OF THE MORE IMPORTANT DISEASES FOR THE LAST 10 YEARS

Diseases	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Smallpox	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..
Chickenpox	373	422	610	450	836	1,313	1,769	1,488	1,039	472
Chickenpox/Broncho/Pneumonia ..	..	..	..	..	..	..	..	..	..	1
Measles	194	50	204	142	117	182	200	301	153	357
Rubella	6	1	11	9	..	1	..	86	36	7
Diphtheria	218	222	370	427	382	345	460	552	712	547
Cerebro Spinal/Meningitis ..	4	4	4	2	4	2	..	..	..	4
Typhoid Fever	62	88	91	117	91	125	114	76	118	127
A.A. Poliomyelitis	68	81	78	50	41	70	19	37	52	405
Erypipelas	15	12	4	3	..	3	..	2	3	1
Whooping Cough	8	27	5	3	..	10	5	85	30	38
Scarlet Fever	..	..	79	..	..	..	..	..	1	..
Mumps	3	14	..	15	9	35	54	52	14	43
Tropical Typhus	8	3	7	92	4	7	..	1	..	1
Amœbic Dysentery	106	90	105	22	134	122	136	126	197	156
Bacillary Dysentery	11	9	18	9	25	18	17	26	74	60
Clinical Dysentery	..	17	40	..	16	34	35	63	150	92
Other Diseases/Carriers	..	..	..	..	..	..	..	..	..	..
Observation	602	731	591	455	440	647	503	936	1,083	1,368
Total ..	1,678	1,771	2,217	1,796	2,049	2,914	3,312	3,831	3,662	3,679

Measles

596. 359 cases were admitted with 10 deaths from broncho-pneumonia and gastro-enteritis.

TABLE 135

NUMBER OF ADMISSIONS, DAYS IN HOSPITAL AND DEATHS BY ETHNIC GROUPS

Ethnic Group	REMAINING 1957		ADMITTED 1958		TOTAL		Deaths
	No. of Patients	No. of days in Hospital	No. of Patients	No. of days in Hospital	No. of Patients	No. of days in Hospital	
Europeans	2	451	31	389	33	840	1
Eurasians	2	6	46	434	48	440	..
Chinese	68	4,719	2,494	29,012	2,562	33,731	78
Indians and Pakistanis	16	69	625	5,531	641	5,600	1
Malays	13	130	368	3,279	381	3,409	2
Javanese	..	..	54	396	54	396	1
Others	..	..	61	458	61	458	..
Total ..	101	5,375	3,679	39,499	3,780	44,874	83

TABLE 136

—	Remaining 1957	Admitted 1958	Total treated	Discharged	Transferred	Died	Remaining 1958	Deaths %	Average No. of Patients
Male	55	2,171	2,226	2,024	76	40	86	..	..
Female	46	1,508	1,554	1,349	58	43	104	..	..
Total ..	101	3,679	3,780	3,373	134	83	190	2.19	123

Maximum capacity of the hospital=250 beds.

Ambulance

597. A total of 1,155 cases of infectious diseases were removed by the Hospital ambulances during the year.

Development Programme

598. A boiler was obtained from the City Engineer and installed in the laundry to replace the old boiler which was condemned by the Government Inspector of Machinery as unfit for further service.

Chapter Twenty-One

RADIOLOGY

599. The year ended with a slight increase of the overall X-ray examinations in all hospitals by 3.9 per cent compared with 1957. Furthermore, an additional 54,829 radiologic examinations were made in the mass minature X-ray survey conducted by Government from July to October. An analysis of the figures in the General Hospital shows that there is a rise of the number of cases coming for specialised investigations. There is also an 18 per cent increase in the number of cases treated by the radiotherapy section.

Staff

600. The staff position at the end of the year is given in Table 137. Dr. F. Y. Khoo, M.B., B.S., D.M.R.D., Senior Radiologist was in charge of the Department; Dr. K. Lal, M.B., B.S., D.M.R.D., was in charge of the Radiotherapy Section.

Table 137

STAFF POSITION IN THE DEPARTMENT OF RADIOLOGY ON 31ST DECEMBER, 1958

——	Radiologists	Radiotherapists	Radiographers	X-Ray Assistants	X-Ray Technicians
General Hospital ..	5	1	17 (Diagnostic) 1 (Therapeutic) (Part-time)	2	3
Tan Tock Seng's Hospital ..	1	..	2 (Diagnostic)	..	3
Woodbridge Hospital	..	..	..	..	..
Kandang Kerbau Hospital ..	..	..	..	..	..
On Scholarship ..	2	3	4 (Diagnostic) 1 (Therapeutic)	.. ..	.. ..
Total ..	8	4	25	2	6

TABLE 138

RADIOLOGIC EXAMINATIONS DONE IN THE DEPARTMENT OF RADIOLOGY

——	1954	1955	1956	1957	1958
General Hospital	46,189	53,880	68,662	69,886	71,331
Tan Tock Seng's Hospital ..	55,014	60,406	67,812	77,292	83,019
Kandang Kerbau Hospital ..	2,983	3,563	4,266	4,435	4,206
Woodbridge Hospital ..	419	3,970	4,106	3,730	2,911
Total ..	104,605	121,819	144,846	155,343	161,467

TABLE 139

RADIOTHERAPY TREATMENTS DONE IN THE DEPARTMENT OF RADIOLOGY

——	1954	1955	1956	1957	1958
Deep X-Ray Therapy:					
Malignant Cases ..	297	353	241	318	360
Non-Malignant Cases ..	118	98	61	37	49
Superficial X-Ray Therapy ..	146	136	77	90	151
Radium Treatment ..	4	12	1	12	30
Total ..	565	599	380*	457	590

* Total cases for 1956 show a decrease because very few cases were accepted for treatment during the period July–October, 1956.

TABLE 140

SUMMARY OF DIAGNOSTIC RADIOLOGIC EXAMINATIONS, 1958

Classification	General Hospital		Tan Tock Seng's Hospital		Kandang Kerbau Hospital		Woodbridge Hospital		Total	
	1957	1958	1957	1958	1957	1958	1957	1958	1957	1958
1. Chest	29,450	28,396	73,135	78,352	1,829	1,563	3,469	2,726	107,883	111,037
2. Bronchography ..	204	200	240	263	..	..	..	..	444	463
3. Gastro-Intestinal Tract (Ba. Meals and Enemas) ..	2,665	2,710	53	..	..	..	..	..	2,718	2,710
4. Renal Tracts	1,902	1,919	39	71	106	34	..	..	2,047	2,024
5. Gall-Bladder	508	487	60	66	4	26	..	..	572	579
6. Heart	770	633	35	..	..	..	..	..	805	633
7. Pregnancy	1	..	..	..	1,569	1,659	..	..	1,570	1,659
8. Salpinography ..	33	43	..	..	..	..	..	..	33	43
9. Encephalography and Ventriculography ..	55	46	..	..	..	..	..	..	55	46
10. Bones and Joints:										
(*a*) Injuries ..	20,512	25,211	691	766	71	76	117	55	20,700	26,108
(*b*) Diseases ..	10,346	8,528	..	..	174	238	144	130	11,355	8,896
11. Sinuses	1,241	1,168	93	112	40	91	..	..	1,374	1,371
12. Teeth	66	49	..	..	..	..	..	..	66	49
13. Tomography	82	67	2,935	3,389	..	..	..	..	3,017	3,456
14. Myelography	40	56	..	..	..	..	..	..	40	56
15. Arteriography ..	90	89	..	..	..	..	..	..	90	89
16. Angiocradiograms ..	58	100	..	..	..	..	..	..	58	100
17. Pelvimetry	..	..	..	..	642	519	..	..	642	519
18. Miscellaneous ..	1,863	1,472	11	..	..	..	..	..	1,874	1,472
Total ..	69,886	71,331	77,292	83,019	4,435	4,206	3,730	2,911	155,343	161,467
Average per month ..	5,824	5,944	6,441	6,918	370	351	311	243	12,945	13,456

TABLE 141

SUMMARY OF RADIOTHERAPY TREATMENTS, 1958

DEEP X-RAY THERAPY

Malignant Cases—

	1957	*1958*
Nasopharyngeal Tumours	119	133
Breast	42	43
Bronchus	20	20
Cervis and Uterus	9	10
Ovary	7	3
Oesophagus	1	13
Mouth: tongue and palate	5	11
Tonsil	5	11
Lip	1	—
Larynx	14	21
Carcinoma cheek and buccal mucosa	3	3
Chronic Myeloid Leukœmia	2	4
Seminoma/Teratoma Testes	3	2
Nose/Nostril	2	—
Thyroid	6	3
Alveolus and antrum	7	5
Malignant skin tumours	1	2
Parotid tumours	1	4
Pituitary tumours	1	1
Osteogenic Sarcoma	4	1
Carcinoma kidney	3	—
Carcinoma liver	—	3
Wilms tumour	1	5
Secondary Glands	8	7
Eye	4	5
Bladder	4	2
Ear	4	2
Hand/elbow/arm	1	2
Lymphosarcoma	3	4
Hodgkin's Disease	3	4
Carcinoma Penis	—	2
Lymph glands	—	1
Neuroblastoma	—	5
Osteoclastoma	—	2
Mediastinal obstruction	—	2
Rodent Ulcer	3	1
Scalp	—	2
Miscellaneous	31	21
	318	360

TABLE 141—*continued*

Non-Malignant Cases—

	1957	1958
Brought forward ...	318	360
Ankylosing Spondylitis	8	24
Tuberculous Glands	10	4
Artificial Menopause	3	2
Calcification bones (Joints)	—	8
Other arthritis	12	5
Hæmangioma	4	2
Lymphoid hypertrophy	—	1
Fibroma nasopharynx	—	2
Herpes Zoster	—	1
	37	49

SUPERFICIAL X-RAY THERAPY

Hæmangiomas	—	8
Keloids	41	64
Rodent Ulcers	8	13
Eczema	22	16
Skin nodules	1	1
Cheiropompholyx	—	20
Other skin	5	2
Warts	—	6
Acne/tinea	—	3
Ringworm	—	3
Miscellaneous	13	15
	90	151
RADIUM TREATMENT	12	30
Grand Total ...	457	590

Teaching

601. Lectures in radiology were given to final year medical students, 55 in the Hilary Term and 59 in the Michaelmas Term. Another shorter course was given to 20 fourth year Dental students in the Michaelmas Term. All these lectures were given by Dr. F. Y. Khoo with the exception of the sessions devoted to radiotherapy to medical students given by Dr. K. Lal.

Development Programme

602. A 1,000 M.A. Muller Diagnostic set together with accessories for a one-plane angiographic apparatus was purchased for installation in the main X-ray Department.

603. A Hoffman Multisection Tomographic set was purchased for the main department.

604. A Watson's Roentgen 600 M.A. diagnostic set and table were installed in the X-ray Department of the Kandang Kerbau Maternity Hospital.

Chapter Twenty-Two

LABORATORY SERVICE

605. The work of the Department of Pathology comprises of autopsies on Coroner's and hospital cases, histological examination of biopsy and autopsy specimens, bacteriological, biochemical and hæmatological investigations, serological tests of blood and cerebro-spinal fluid, pregnancy tests and preparation of T.A.B. cholera and autogenous vaccines.

606. Work done by the Department served Government hospitals, clinics and general practitioners; it is not inclusive of all the laboratory service in Singapore, as many similar investigations are done in the City Council laboratories and in the clinical laboratories of various hospitals.

Staff

607. The professional staff of the Department consisted of two Consultant Pathologists, one Senior Registrar and three Assistant Pathologists. Dr. L. S. da Silva, L.M.S. (Singapore), DIP.BACT. (Manchester), M.D., Senior Pathologist was in charge.

Table 142

INVESTIGATIONS DONE IN THE DEPARTMENT OF PATHOLOGY

——	1954	1955	1956	1957	1958
Necropsy	2,025	2,172	2,336	2,627	2,576
Histology	7,039	8,728	9,444	10,120	11,374
Bacteriology	25,617	33,406	44,576	50,107	43,357
Serology	58,011	74,200	74,196	71,746	72,347
Hæmatology	1,922	10,426	25,974	29,548	32,587
Total ..	94,614	128,932	156,526	164,148	162,038

Post-mortem Examinations

608. The total number of necropsies done during the year was 2,576. Coroner's cases accounted for 1,170 cases (45 per cent). These necropsies were conducted by staff of the Government Department of Pathology. "Hospital" cases accounted for the remaining 1,406 cases. These necropsies were conducted by staff of the University Department of Pathology.

TABLE 143

SUMMARY OF CAUSES OF DEATH IN POST-MORTEM CASES

——	1954	1955	1956	1957	1958
Tuberculosis	129	179	125	124	83
Hypertension	46	76	71	51	86
Coronary	73	76	86	85	73
Cardiovascular Syphilis ..	41	23	20	19	31
Malaria	3	2	1	1	..
Beri Beri	13	14	6	11	21
Amœbiasis	7	11	4	4	3
Bacillary Dysentery ..	16	1	4	3	6
Typhoid	5	4	1	..	3
Diphtheria	4	3	8	3	4
Lobar Pneumonia ..	28	66	58	45	39
Malignant Tumours ..	90	101	109	113	91

TABLE 144

DEATHS FROM VIOLENCE AND OTHER UNNATURAL CAUSES

——	1954	1955	1956	1957	1958
Total Necropsies	2,025	2,172	2,336	2,627	2,576
Coroner's Cases	948	1,034	1,042	1,255	1,170
Injuries from Cutting and Piercing Instruments ..	13	20	21	21	29
Injuries by Blunt Instruments..	2	8	10	10	15
Injuries by Firearms ..	11	5	23	7	5
Hanging	59	64	51	77	58
Drowning	92	68	72	68	67
Caustic Soda Poisoning ..	49	41	42	28	13
Other forms of Poisoning ..	10	17	26	16	21
Vehicle Accidents	104	148	160	162	194
Other Forms of Violence and Unnatural Deaths ..	120	156	139	152	159
Deaths from all Forms of Violence and Unnatural Causes	460	527	544	541	561

TABLE 145

AGE, SEX AND RACE INCIDENCE OF AUTOPSIES ON ALL DEATHS CORONER'S AND WARD CASES 1958

Age	Chinese		Indian		Malay		Others		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Under 1 year ..	565	396	12	8	3	2	3	3	583	409	992
1–10 yrs.	221	192	7	5	5	..	1	1	234	198	432
11–20 ,,	66	24	1	5	5	2	2	..	74	31	105
21–30 ,,	76	35	9	5	9	5	9	..	103	45	148
31–40 ,,	67	39	28	6	9	5	7	2	111	52	163
41–50 ,,	146	49	47	1	8	3	10	..	211	53	264
51–60 ,,	168	22	39	4	5	1	5	..	217	27	244
61–70 ,,	102	28	12	3	3	..	5	..	122	31	153
Over 70 yrs. ..	33	12	3	..	4	1	..	..	40	13	53
Total ..	1,444	797	158	37	51	19	52	6	1,695	859	2,554

Autopsies on decomposed corpses and bones .. 22

Total .. 2,576

Histology

TABLE 146

WORK DONE IN HISTOLOGY SECTION

Total number of sections 11,374

1. *Sections from Biopsies:*
   - (i) Total number of cases 6,484
   - *(ii) Total number of tissues 7,717
   - (iii) Total number of sections 10,613

   *(Including 337, Cytological examinations).

2. *Sections from Necropsies*:
   - (i) Total number of cases 251
   - (ii) Total number of sections 761

TABLE 147

INCIDENCE OF DISEASE IN BIOPSY TISSUES

	1955	*1956*	*1957*	*1958*
Inflammation ...	1,393	1,575	1,548	1,781
Tuberculosis ...	240	332	292	287
Benign tumour ...	711	777	651	855
Malignant tumour ...	698	815	962	1,151
Others	2,166	3,140	3,121	3,643
Total ...	5,208	6,639	6,574	7,717

Bacteriology

609. Bacteriological examinations decreased by 6,600, but the new technique used and the large number of antibiotic sensitivity tests carried out have caused an increase in the volume of work carried out.

610. The culture for amœbæ from stools and other sources continues to be of great value. Of 1,704 specimens of stools and rectal swabs, 94 were proved positive of E-histolytica by culture as against 48 by microscopical examination (28 trophozoites, 20 with cysts).

611. The Poleff technique first introduced in 1957 for staining Inclusion and Elementary Bodies of Trachoma was used in 1958.

612. In 1958 all strains of C. Diphtheria isolated were subjected to sugar and starch fermentation and virulence testing. Of the 332 strains tested, 108 were positive for virulence. The majority of the strains were of the "mitis" type.

TABLE 148

BACTERIOLOGICAL EXAMINATIONS, 1958

	1958
Throat and Nasal Swabs for Culture	9,081
Fæces for Shigella and Salmonella Groups	2,274
Blood for Culture	1,371
Agglutination Test for Enteric Group (Widal Reaction) ...	1,524
Agglutination Test for Typhus Group (Well-Felix Reaction) ...	1,524
VI Agglutination Test for Typhoid	45
Blood Clot Cultures for Enteric Group	1,409
Urine Cultures	2,695
Agglutination Test for Crucella Group	16
Agglutination Test for Glandular Fever (Paul Bunnell)	45
Cerebro-Spinal Fluid Cultures	955
Urethral and Vaginal Swabs for Cultures for N. Gonorrhœa ...	91
Swabs for Purperal Sepsis (Cultures)	724
Tissue for Clostridia Group	19
Total number of Antibiotic Tests carried out on Pyogenic and Pathogenic Organisms	11,440
Sputum, Pus, Pleural Fluid, Gastric Lavage, Cerebro-Spinal Fluid etc. (Cultures) for M. Tuberculosis	6,666
Pregnancy Tests	230
Sterility Tests	973
Animal inoculations Tests	152
Virulence Tests for K.L.B.	332
Culture for Amœba	1,704
Miscellaneous	87
Total ...	43,357

613. Approximately 3,200,000 c.c. of media of different types and 900 litres of physiological saline were prepared in the Department.

Serology

TABLE 149

WORK DONE IN SEROLOGY SECTION

Blood	*1957*	*1958*
V.D.R.L. Tests	52,945	53,158
Kahn Tests—Qualitative	8,205	9,214
Kahn Tests—Qualitative	21	87
Wasserman Tests	3,862	4,005
Price Precipitation Test	400	284
Gonococcus Complement Fixation Test ...	190	226
Filarial Complement Fixation Test ...	1,823	1,512
Total ...	67,446	68,486
C. S. F.		
V.D.R.L. Tests	1,615	1,434
Kahn Tests	1,561	1,264
Wasserman Tests	775	792
Colloidal Gold Test	349	371
Total ...	4,300	3,861
Total Number of Specimens examined =	71,746	72,347

614. The antigens for the V.D.R.L., Kahn and Wasserman reactions and Gonococcus Fixation Test were standard antigens, obtained from Burrough & Welcome Laboratory. The antigen for the Price Precipitation Reaction is prepared in this laboratory. The antigen for the Filaris Complement Fixation Test was prepared from Dirofilaria immitis which was received from Professor Beaver of Tulane University, U.S.A. It has been used in investigations on 'Eosinophilic Lung'.

Development Programme

615. The new building, to house the Government Bacteriology and Pathology Units, University Department of Pathology, was completed at the end of May 1958. The new building will also house the Serology and Biochemistry Units on the top floor.

Teaching

616. The teaching of Forensic Medicine was again carried out by Dr. L. S. da Silva. For the first part of 1958 there were 55 medical students. The number for 1958–59 session has now risen to 84.

617. Regular Pathological Conferences were organised by the Morbid Anatomy section of our Department during 1958. These 'Pathological Conferences' were held weekly and were well attended. 'Surgico-Pathological Conferences' were held in conjunction with the staff in the Surgical Units of the General Hospital.

Chapter Twenty-Three

BLOOD TRANSFUSION SERVICE

618. The Blood Transfusion Service has continued to serve all hospitals in Singapore (except the British Military Hospital) from the Centre at the General Hospital.

619. The work of the Department has continued on the same lines as in previous years but the volume of work done has continued to increase as more blood is required for transfusions to patients in the hospitals.

620. The policy of not paying donors and not charging for transfusions given has continued. Friends and relatives of patients who receive transfusions are asked to become donors and they are coming forward in increasing numbers. However as the majority of patients to whom transfusions are given are from the poorer and less well nourished sections of the community, it is not possible to expect to obtain all the blood needed from them. The Service must continue therefore to rely largely on the altruism of voluntary donors.

621. The amount of blood handled during the year increased to 9,952 flasks (9,221 in 1957) an average of nearly 830 a month, the greatest part going to patients in the Surgical Wards of General Hospital and to women in Kandang Kerbau Hospital.

Staff

622. The staff consisted of 2 Medical Officers, 1 Sister Supervisor and 14 Laboratory Technicians. Dr. (Mrs.) M. M. H. Gibson-Hill, M.R.C.S., L.R.C.P., was in charge.

Donors and Recipients

623. The number of donations coming from relatives and friends of patients has increased; there were 1,902 in 1958 compared with 859 in 1956 and 1,583 in 1957. This is an average of 158 a month, or 19 per cent of the total. There has been a corresponding increase in the donations from the Chinese community, the total number being 3,029 (2,592 in 1957), an average of 252 a month, or 30 per cent of the total given.

624. Against this the Service is still far from being locally independent, as 3,735 donations or 37 per cent of the total came from Europeans, mainly British; of these 2,913, an average of 241 a month or 29 per cent of the total came from members of the Armed forces, the majority being from the Royal Air Force.

625. Steady progress has been made with the locally domiciled population who are coming forward more readily to support this service to the community.

626. Many regular donors come every three or four months. During the year 149 Silver Medals for 10 donations and 37 Gold Medals for 20 donations and 11 Gold Bars for 30 donations were awarded. The total number of people who have given their blood ten or more times is now 828. Of these 136 have given 20 times and 17 have given 30 times or more.

TABLE 150

DONORS AND RECIPIENTS, 1954–58

	Donors	*Recipients*
1954	6,684	6,519
1955	7,470	7,492
1956	7,987	7,769
1957	9,221	9,092
1958	9,952	9,622

TABLE 151

ANALYSIS OF DONORS AND RECIPIENTS BY RACE—1958

Donors	Male	Female	Total	Recipients	Male	Female	Total
European ..	3,572	136	3,708	European ..	203	130	333
Chinese ..	2,949	82	3,031	Chinese ..	3,172	4,158	7,330
Indian ..	1,290	5	1,295	Indian ..	423	524	947
Malays ..	1,194	14	1,208	Malays ..	266	612	878
Eurasian ..	611	8	619	Eurasian ..	45	59	104
Others ..	89	2	91	Others ..	11	19	30
Total ..	9,705	247	9,952	Total ..	4,120	5,502	9,622

TABLE 152

CATEGORIES OF DONORS 1954–58

———	1954	1955	1956	1957	1958
Total Civilian donors ..	3,963	5,502	4,996	4,683	5,061
Donations from Service Personnel	2,198	1,689	2,162	2,955	2,926
Relatives: Taken	376	279	859	1,583	1,965
Offered and rejected ..	65	26	133	107	401
New donors	2,817	2,227	3,394	3,788	4,197
Voluntary donors offered and rejected	120	316	443	244	408

TABLE 153

ANALYSIS OF DISTRIBUTION 1954–58

	1954	1955	1956	1957	1958
General Hospital	3,606	4,197	4,239	5,132	5,549
Kandang Kerbau Hospital ..	2,433	2,888	2,985	3,516	3,524
Tan Tock Seng's Hospital ..	18	20	30	23	47
Youngberg Memorial Hospital	163	149	155	143	149
R.A.F. Hospital, Changi ..	125	153	191	188	252
Asian Hospital Naval Base ..	32	6	7	..	8
Middleton Hospital ..	33	8	9	16	8
Trafalgar Home	8	6	42	25	26
St. Andrew's Mission Hospital	6	1	8	6	6
Singapore Nursing Home ..	12	10	24	16	5
Other Hospitals	83	54	79	27	48
Total ..	6,519	7,492	7,769	9,092	9,622

Technical Work

627. The Laboratory has remained open day and night through the year, some of the Laboratory Assistants work on three shifts so that the Laboratory is always attended. The work has continued to increase in volume and in scope.

628. The Department has continued to be the central depôt for the preparation, cleaning and distribution of all apparatus for intravenous therapy in all the hospitals. During the year 12,089 blood sets, 12,868 saline giving sets and 11,560 taking sets were distributed.

629. During the year latex rubber tubing ceased to be easily available and was replaced by silicone tubing. This proved so costly that the red rubber tubing was bought instead. While this is a retrograde step, but it had to be made in the interests of economy. It is hoped that before very long plastic sets will come into general use and will be available at a price which will warrant their purchase.

630. Besides the normal grouping of donors and patients' blood and matching for transfusions, specimens for blood group anti-body investigations are received from various parts of Malaya and Borneo and even Sumatra. Owing to the rarity of the Rh. negative gene in Asian people few antibodies are encountered in routine work, but specimens for special investigations are always welcome. Those that cannot be dealt with are passed on to the Blood Group Reference Laboratory at the Lister Institute in London who have kindly given assistance.

Publicity and Propaganda

631. This has continued along similar lines as previously with the assistance of voluntary workers. Continued appeals and publicity and propaganda has been directed towards the local population. This is essential as it is felt that there is no hope of this service becoming self-sufficient unless fully supported by the local population.

632. The Centre is grateful to the followings who have provided refreshments for donors during the year:—

The East Asiatic Co. Ltd. for Carlsberg Beer and Stout;
Nestles Ltd. for Milo, Nescafe and Milkmaid Milk;
Malayan Tobacco Distributors Ltd. for Churchman Cigarettes;
Borneo Co. for Bovril;
Sime Darby and Co. for Guinness Stout and Bournvita;
A. Wander Ltd. for Ovaltine;
Guthrie & Co. for Emu Beer and
Fraser and Neave for Beer and Aerated Waters.

Chapter Twenty-Four

PHARMACEUTICAL SERVICE

Staff

633. During the year under review the Pharmaceutical Services were under the supervision of Mr. D. E. Lovett, B.PHARM., F.P.S. and the staff position at the end of the year is given in Table 154.

Table 154

STAFF OF THE PHARMACEUTICAL SERVICE

	Pharmaceutical Chemists	*Pharmacists*	*Pupil Pharmacists*	*Dispensing Assistants*
Medical Headquarters	—	1	—	—
Government Medical Store ...	2	3	—	6
General Hospital	—	6	2	29
Kandang Kerbau Hospital	—	2	—	4
Tan Tock Seng's Hospital	—	1	—	5
Trafalgar Home	—	1	—	—
Woodbridge Hospital	—	1	—	1
Middle Road Hospital	—	1	—	2
Out-patients' Services	—	2	—	2
Total ...	2	18	2	49

634. The pharmacist on the staff of the Ministry Headquarters is engaged on full-time duties as an Inspector of Dangerous Drugs and Poisons. The number of pharmacists employed was increased by two during the year. There are two officers on study leave at present taking the course of study at Brighton for the Ph. C. Diploma.

635. Another intake of probationer Dispensing Assistants under the new scheme was made early in the year. These are recruited from persons of school-leaving age with, normally, a Grade II School Certificate. In addition to training during the course of their work, they received weekly lectures and practical classes, and will take a departmental examination before the end of their three-year probationary period. The total number of Dispensing Assistants shown in Table 154 above includes many of the older Hospital Assistants who were trained in dispensing and are working as dispensers.

Supplies and Costs of Drugs

636. The volume of supplies of drugs to wards and numbers of out-patient prescriptions filled showed an increase in all the main hospital dispensaries. These increases are reflected in the figures given below for total expenditure on drugs and chemicals throughout the Ministry. Generally speaking there has been no real increase in the cost of pharmaceutical supplies, in fact many drugs have fallen in price during recent years, yet despite this the expenditure has risen steadily because of the larger numbers of patients treated in hospitals.

637. The total expenditure on drugs and pharmaceuticals in all hospitals, clinics, child health centres and out-patient dispensaries was $1,793,000. Approximately 68 per cent of this total is derived from expenditure on a few major items indicated in Table 155.

TABLE 155

MAIN ITEMS OF EXPENDITURE ON DRUGS AND PHARMACEUTICALS

	Quantity 1958	Cost 1957	Cost 1958
		$	$
Antibiotics:			
Tetracyclines	..	170,100	204,400
Streptomycin	497,500 grm.	147,100	133,700
Procaine Penicillin Injections ..	363,700 M.U.	50,200	70,100
Penicillin V. Tablets ..	1,145,000	33,300	44,700
Penicillin Injections ..	112,200 M.U.	26,800	21,700
Chloramphenicol	..	14,100	21,800
Sod. Aminosalicylate and Isoniazid	..	261,400	238,100
Intramuscular Iron Injections ..	77,100 amps.	81,000	81,400
Corticosteroids	..	111,600	76,600
Vitamins	..	55,900	51,600
Sulphonamides	2,750 kilos	42,300	49,300
Antihistamines	..	37,100	46,000
Tolbutamide tablets	776,000 tablets	18,300	38,000
Codeine Phosphate	177 lb.	16,800	36,000
Chlorpromazine	..	19,800	30,000
Insulin (Plain, P. Z and Lente) ..	18½ m.u.	30,800	26,300
Alcohol (B.P. and Industrial) ..	8,950 gallons	22,600	17,500
Acetazolamide tablets ..	103,500 tablets	14,500	16,900
Cod Liver Oil	2,600 gallons	16,100	12,000
		1,169,800	1,216,100

Breakdown of Drug Expenditure

638. The total expenditure of $496,400 on antibiotics during the year represents 28 per cent of the entire drug bill. The rise from the figure of 26 per cent last year means that apart from increases in actual expenditure, the proportionate cost of antibiotics has shown an increase for four successive years. The current figure of 28 per cent is somewhat higher than the United Kingdom Ministry of Health's figure which in recent years has been around 20 per cent for gross expenditure for antibiotics.

639. Within the total for antibiotics, the expenditure on Tetracyclines continues to represent the largest proportion. This year, for the first time, the cost of Sodium Penicillin injections, once a major item in the drug bill, is the lowest of all the main antibiotics costs. Expenditure on Chloramphenicol has risen by 50 per cent largely due to an increase in the use of Chloramphenicol Cinnamate which is prepared as a flavoured suspension in the hospital pharmacies and prescribed mainly for children's ailments.

640. The quantity of Penicillin V oral tablets used was more than double the previous year's figure but this did not cause a proportionate increase in cost as the price rate for phenoxymethyl penicillin was reduced considerably during the year. These tablets are now made in our own laboratories.

641. The expenditure on all the three tuberculostatic drugs, i.e. Streptomycin, P.A.S. and Isoniazid, showed a slight decrease. This was due to falls in the price rates which more than off-set the increase in the amounts of these drugs used in tuberculosis treatments at the Tan Tock Seng's Hospital and elsewhere.

642. Expenditure on Corticosteroids was very greatly reduced, again as a result of lower price rates obtainable by competitive tender. In last year's

total for Corticosteroid expenditure, a considerable proportion represented expenditure on Cortisone tablets and injections but this year the use of Cortisone has dwindled to a very small figure. Of the total expenditure on this group of drugs about one-third represents the cost of 2,600 grams of Hydrocortisone which was used in preparation of Hydrocortisone ointments, most of the remainder was on 5 mgm Prednisolone tablets. Triamcinolone was introduced during the year but the quantity used was very small.

643. Expenditure on most of the other main items in the drug bill was increased more or less in proportion to the increases in the numbers of patients treated throughout the Ministry. The cost of vitamins fell slightly due to lower prices, particularly affecting the price rate for Aneurin which is the main item in the vitamin group.

644. The cost of Insulin was also lower, and this year the quantity of the Insulin used was also down slightly to a total of $18\frac{1}{2}$ million units of all types. Bearing in mind that many more diabetics were treated at the Government hospitals and clinics, the reduced use of Insulin demonstrates the fact that a larger proportion of diabetics are now being controlled by oral therapy with Tolbutamide tablets. Three times the quantity of Tolbutamide was supplied this year and the expenditure increased appreciably. However, it seems probable that we shall be able to manufacture the tablets locally next year with considerable saving in cost.

Stores and Laboratories

645. At the Government Medical Store an increase in the work of both the Stores section and the Pharmaceutical Laboratories is reflected in the following comparative table covering the past 11 years.

TABLE 156

COMPARATIVE TABLE WORK AT GOVERNMENT MEDICAL STORE

Stores Section		*Laboratory Section*	
Number of orders for supplies to hospitals, clinics etc. in 1958	8,083	Number of Works Tickets completed by Laboratory	2,266
Total value of drugs chemicals etc. distributed ...	$1,792,441	Nett value of materials used in manufacture of pharmaceuticals	$579,152
Total value of surgical equipment, dressings and sundries distributed ...	$804,352		
Total ...	$2,596,793		

Turnover for past 11 years
(Total value of stores supplied)

		$
1948	...	623,881
1949	...	1,032,564
1950	...	1,139,701
1951	...	1,184,485
1952	...	1,448,831
1953	...	1,629,474
1954	...	1,503,867
1955	...	1,615,707
1956	...	1,887,264
1957	...	2,431,202
1958	...	2,596,793

Production for past 11 years
(Nett value of materials used)

		$
1948	...	47,805
1949	...	92,864
1950	...	107,438
1951	...	87,646
1952	...	176,412
1953	...	196,792
1954	...	249,333
1955	...	269,509
1956	...	325,053
1957	...	469,471
1958	...	579,152

646. It is difficult to obtain a simple comparison between the pharmaceutical manufacturing work carried out from year to year except by reference to the actual finished products supplied by the laboratories to the stores section given in Table 156. The number of 'works tickets' or 'job-cards' completed is usually about 2,000 each year, but as the hospitals requirements increase the batches made on a laboratory job are increased, e.g. from 2,000 ampoules to 10,000 and one million tablets to four millions. The figures quoted above for the value of crude drugs, chemicals, containers and other raw materials used in the production of pharmaceuticals, give a reasonable guide as the average prices of these do not fluctuate appreciably.

647. The laboratories again completed an appreciably increased manufacturing programme. The number of tablets produced was again over 50 millions and over half a million ampoules were prepared. A total of 74,600 bottles of transfusion fluids were packed and this means an average of nearly 300 per working day. There was an increase in the production of antiseptics, i.e. lysol, iodine and the dettol-type chloroxylenol solution, where the quantities prepared totalled over 8,000 gallons. The packing of ointment tubes rose from 20,000 in 1956 to 52,000 in 1957 and 71,000 in 1958. Of these about 12,000 were tubes of various hydrocortisone creams, other items being penicillin ointment, golden eye ointment, obstetric cream, etc. The production of codeine cough linctus and other medicinal syrups rose from 2,600 gallons for 1957 to 7,780 gallons this year. Equipment has been devised to make use of the steam supplies for rapid preparation of these syrups, a 100-gallon batch containing 8 cwt. of sugar, i.e. four sacks, is prepared in about 15 minutes by the use of steam.

648. A comparison is given in Table 157 of the 1958 production figures in the pharmaceutical laboratory with the figures for previous years.

TABLE 157

PRODUCTION IN THE GOVERNMENT MEDICAL STORE, 1954–58

——	1954	1955	1956	1957	1958
Tablets (millions)	23.2	39.4	45.6	56.4	54.9
Ampoules (Number)	150,400	324,400	563,700	440,000	535,600
Multidose Inj. Vials (Number) ..	72,900	73,900	29,400	19,200	17,000
Sterile Transfusion Fluids (pint bottles) ..	12,500	18,500	37,500	76,700	74,600
Eyedrop/Eardrop Vials (Number) ..	..	..	13,600	14,000	44,500
Tinctures, Infusions, Extracts (Gallons) ..	845	1,625	2,250	2,318	3,300
Emulsions (Gallons)	341	590	476	490	500
Mixtures, Lotions, Liniments (Gallons) ..	4,100	14,700	8,900	8,190	8,950
Antiseptic Fluids (Gallons)	..	..	4,740	7,290	8,300
Linctus and Syrups (Gallons) ..	3,330	1,260	1,360	2,620	7,700
Ointments and Creams (lb.)	5,800	8,600	7,700	10,800	10,900
Ointments and Creams in Tubes (Number)	..	9,500	20,100	52,300	71,450
Laboratory Reagent Solutions (litres) ..	554	880	436	520	640
Suppositories and Pessaries (Number) ..	6,300	19,900	18,900	33,900	33,100

649. In relation to this relatively large turnover of pharmaceutical products, the expenditure on general maintenance of the manufacturing laboratory was only $4,543; on City services, fuel oil for boiler and other overhead costs approximately $12,000, and staff salaries $83,000. The value of raw materials converted into manufactured products, i.e. the nett cost, was approximately $580,000, thus the total costs of running the laboratories represented

a 17 per cent surcharge on the cost of the materials used in the manufacture of pharmaceuticals. The cost of importing finished pharmaceutical products would be far higher than these rates and there is a nett saving of $\frac{1}{4}$ million dollars or more gained through the operation of these laboratories. Moreover they employ some 30 persons in a profitable though non-commercial local industry. All the products of these laboratories are batch tested for sterility by the Department of Pathology and for purity or content of active drug by the Department of Chemistry. This department has also assisted from time to time in devising methods of formulation and similar experimental work and their co-operation is greatly appreciated.

Stores Turnover

650. In the stores section of the Government Medical Store, the opening of new premises and increase in the activities of hospitals and clinics caused a 21 per cent increase in the number of orders handled but the value of all medical supplies issued was only 7 per cent above the figure for 1956. The figures in the above table do not include the value of drugs, containers, etc., issued to the pharmaceutical laboratories for conversion to manufactured pharmaceuticals. If these are added they give a gross value for stores issues of $3,175,825.

651. Normal pharmaceutical requirements were indented quarterly and put to tender from London by the Crown Agents whose comprehensive records of manufacturers and bulk buying discounts ensure the most advantageous purchase prices. A few selected items were put out to tender locally and X-ray films, medical gases, and plaster of paris bandages were purchased on contract from local firms. Local purchases totalled slightly over three-quarters of a million dollars in value.

652. The imports section of the store has provided the statistics in relation to the work of the past three years in Table 158.

TABLE 158

SUMMARY OF WORK OF IMPORTS SECTION, 1956–58

	1956	*1957*	*1958*
Number of Bills of Lading exchanged ...	834	1,006	775
Number of crates and parcels received:			
(i) per sea	5,005	5,668	5,103
(ii) per post, air and rail	1,519	2,315	1,669
Number of crates and parcels despatched:			
(i) per sea	80	52	66
(ii) per post, air and rail	88	316	95
Number of claims on shippers or suppliers ...	94	98	62

653. As in previous years supplies were made to the University of Malaya, S.A.T.A., and various charitable institutions. Urgent requests, usually for special injections, for the Army and R.A.F. hospitals were catered for, and Dangerous Drugs were supplied to private pharmacies. Occasional supplies were also sent to the Sarawak Medical Department and the Federation Medical Department. The Government Medical Stores at Kuala Lumpur and Penang also supplied this department with drugs and pharmaceuticals on occasion when stocks were exhausted due to unusual demands, and their assistance is greatly appreciated.

654. This year, at the request of the City Health Officer, the Government Medical Store supplied the requirements of the City Council clinics and dispensaries. These increased appreciably during the year and a total value of $120,306, mainly in the form of finished medicines, was supplied to the Council. To this may be added a total of $88,949, value of supplies to the other private concerns referred to in the previous paragraph making a total of $209,255, supplied outside Government departments, this being equivalent to 8 per cent of the gross turnover.

Stocks in Hand

655. The value of stores in stock at the Government Medical Store at the end of the year was $1,705,416, which is slightly below the value at 1st January. The value of stores written off during the year was $13,864. In relation to the figures for the year's turnover these represent a stock holding of 65 per cent of the value of the turnover and an annual write-off of $\frac{1}{2}$ per cent of the turnover. In view of the fact that it is essential to keep 'dead stocks' of a number of items in case of emergency, these stock figures can be considered very satisfactory.

Financial Statistics

656. A high proportion of the Crown Agents Indents for hospital supplies are charged direct to the hospital vote although the documenting of orders, importing and checking are handled by the Government Medical Store. The total value of these orders was $417,757. The value of orders placed through the Crown Agents for stores purchased through the Government Medical Store buying account and other financial statistics relating to the year's turnover in this account are given in Table 159.

TABLE 159

FINANCIAL STATISTICS FOR THE GOVERNMENT MEDICAL STORES ACCOUNT, 1958

		$
UNALLOCATED STORES PURCHASE ACCOUNT		
1.	Value of Orders placed through Crown Agents ...	1,841,377
2.	Value of Stores purchased locally	760,341
3.	Value of Stores purchased direct from other countries ...	20,531
UNALLOCATED STORES RECOVERIES ACCOUNT		
1.	Total cost of Stores billed	2,507,000
2.	Total Bills Outstanding	14,100
3.	Payments to U.S. Recoveries Accounts:—	
	(i) by adjustments	2,293,205
	(ii) by cash	1,772
4.	Payments to Revenue	200,235
5.	Surcharge on sales to non-Government Institutions ...	4,217

Chapter Twenty-Five

OTHER SPECIAL DEPARTMENTS

PRISON HOSPITALS

H.M. Prisons, Changi

657. The Changi Prison Clinic and Hospital is staffed by a Medical Officer, 3 Hospital Assistants and 3 prison orderlies. The Medical Officer in charge reports that the Hospital Assistants make two rounds daily and treat minor conditions.

658. A regular inspection of the Prison health and sanitation was made and a high standard of health and sanitation was maintained throughout the year. The diet was adequate and wholesome. Special diets were ordered for sick patients.

659. The daily average number of prisoners in the Prison was 619. The total number of out-patient attendances during the year was 29,650 and 31 minor operations were performed. The principal diseases were fevers and respirator diseases.

660. A visiting psychologist from Woodbridge Hospital made nine visits to the prison. He saw and recommended treatment for 15 cases.

H.M. Prison, Pearl's Hill

661. The Local Prison Clinic and Hospital is staffed by a Medical Officer, 8 Hospital Assistants and prisoner orderlies. The total number of prisoners admitted in the Prison during 1958 was 4,591, the daily average being 560.3.

662. The Prison Hospital has 100 beds. There were 1,200 admissions into the Hospital. Total out-patients treated at the clinic were 28,604. Vaccinations against small-pox were carried out on 4,602 cases. In the Prison Hospital there were 845 admissions for opium addictions out of a total of 1,200 admissions.

Changi Prison Staff Clinic

663. The Clinic is situated at the entrance to the Changi Prison and is for the convenience of Prison staff and their families and for Government employees resident in this area. The Medical Officer, Changi Prison, assisted by the medical staff of the Prison run this clinic. The clinic functions daily between 8.30 to 9.30 a.m. except Sundays and holidays. During the year 4,451 patients attended this clinic.

OPIUM TREATMENT CENTRE

664. During 1958 the Advisory Committee investigated 656 male addicts (including 50 volunteers) and 15 female addicts (1 volunteer). A total of 399 males (including 42 volunteers) were admitted to St. John's Island for rehabilitation. By the end of the year 365 males completed their rehabilitation and were discharged (including 41 volunteers).

POLICE HOSPITAL

665. The Police Training School Clinic and Hospital is for members of the Police Force. During the year 11,649 out-patients attended this clinic and 537 recruits were examined. 291 patients were admitted to Police Training School Hospital in 1958.

POLICE FAMILIES' CLINIC

666. This Clinic was transferred to the Out-patient Services from the Health Department in January 1958. A Lady Medical Officer was in charge of the clinic during the year, with one Staff nurse and a Police amah to assist her.

667. The Lady Medical Officer visits in the morning the various station branches and in the afternoons she works at the main clinic, Hill Street. At each station there is a small clinic where the Lady Medical Officer examines and treats patients on the spot. Each station has a medicine chest with the essential drugs. All emergency cases are sent to hospital and all cases that need specialist treatment are sent to the respective specialist at the various hospitals. The Lady Medical Officer also attends to all early pregnancies and later about six months, sends them to the nearest ante-natal clinics. During the year 1958 the total number of cases seen were 22,994 (including 5,400 new cases).

CIVIL MEDICAL DEFENCE

668. Formed six years ago under the terms of the Civil Defence (Singapore Hospital Reserve—Formation) Rules of August 1952, the Singapore Hospital Reserve is still being administered by the Civil Defence Commissioner at the Civil Defence Headquarters in Kolam Ayer Lane. The objects of this Reserve is to provide trained personnel who, in time of war or any major civil emergency, would reinforce the nursing and hospital staff of all hospitals in Singapore.

669. In peace-time men and women enrolled in the Reserve as volunteers, undergo part-time training in the wards of the General Hospital and at the Training Centre at Kolam Ayer. From time to time they join in Civil Defence Corps exercises by manning First Aid posts and 'mock-up' hospitals. The possession of a Home Nursing Certificate and a First Aid Certificate issued by the St. John Ambulance Association or the British Red Cross Society, is still required before the volunteer is enrolled into the Reserve.

670. *Personnel.*—At the beginning of the year under review the strength of the Reserve stood at 887 made up of 669 Nursing Auxiliaries and 218 in the General Duties Section. During the year there were 91 enrolments and 224 resignations. At the close of the year the strength was 754 (541 Nursing Auxiliaries and 213 for General Duties).

671. *Training.*—The training of the Nursing Auxiliary is divided into two phases. The first phase involves 25 four-hour sessions (once a week) in different wards of the General Hospital under the close supervision of Sisters in charge of wards, and 13 two-hour periods (once a week) of instruction (in Malay and Mandarin also) in elementary nursing at the Civil Defence Training Centre. Upon the successful completion of this phase with an examination conducted by the staff of the Nurses' Training School, the Nursing Auxiliary

is awarded the 'Blue' Efficiency Bar. Then begins the second phase of 5 four-hour sessions in more advanced duties at the General Hospital, followed by 13 two-hour periods of instruction with another examination at the end of the training. The successful Nursing Auxiliary is awarded the 'Red' Efficiency Bar and can then be considered as a trained Hospital Reservist..

672. During the period under review 9 Nursing Courses (5 for 'Red' Efficiency Bar and 4 for 'Blue' Efficiency Bar) were held. 66 men and women were successful in obtaining the 'Blue' Efficiency Bar and 35 the 'Red'. Six Nursing Auxiliaries qualified as Volunteer Instructors.

673. For 1958 Nursing Auxiliaries attended Hospital training for 15,600 man-hours at the General Hospital.

674. *Emergency Duties.*—Members of the Hospital Reserve were called upon to help in nursing and other general duties at the Dutch Evacuee Camps at Ulu Pandan and Tanah Merah Besar at the beginning of this year. In April they gave voluntary service at the Geylang English School which was used temporarily to house the 'fire victims' of Lorong 3.

675. In August when there was a polio outbreak many of our Nursing Auxiliaries assisted at the Polio Immunisation Centres which were opened at many places throughout the Island.

676. *Special Help.*—In June eight Nursing Auxiliaries acted as 'models' for the preliminary examinations held at the School of Nursing, General Hospital, for the student nurses.

677. *Combined Civil Defence Exercises.*—Members of the Hospital Reserve participated in the Civil Defence Corps exercise 'Fourth Arm' held on 19th and 26th October, 2nd and 16th November. They manned and ran the hospital and First Aid post services required for the exercises.

DISTRICT NURSING SERVICE

678. The District Nursing Service started in April 1958, operating a service within the Out-patient Services of the General Hospital. Its primary function is to provide follow-up care to patients discharged from the General Hospital; it also acts as a training ground for public health nurses undergoing a course in public health nursing at the Institute of Health.

679. In the early months two Staff nurses from the General Hospital carried out the work under the supervision of a Sister in charge, assisted by a Tutor supplied by the World Health Organisation.

680. During the months of October, November and December 1958 eight Public Health Nurse students received training covering a period of three months, caring for patients in their own homes, practical experience and theoretical instruction being given by the Tutor. Doctors gave lectures in special diseases, and Physiotherapists, Almoners and Occupational Therapist contributed to the student training.

681. Of the 118 patients cared for from April to December, 41 were orthopædic cases, 39 were surgery and 58 medical. A total of 4,766 visits were paid to the homes, and treatment consisted of general care, dressings and injections.

SOCIAL WELFARE HOMES AND CENTRES

682. During the year there were two Medical Officers, one of whom was working on a part-time basis, to provide a sufficient therapeutic and preventive medical service in the various institutions under the supervision of the Social Welfare Department. Regular visits were made to these institutions for routine medical examination and treatment of the sick, and the inmates maintained a high standard of health throughout the year. Periodic inspections from the point of view of hygiene and sanitation were also carried out, and the kitchens and dormitories were inspected at least once a month.

683. The 700 inmates in the ten Homes were under the care of the full-time Medical Officer, while the 19 Children's Social Centres were under the charge of the part-time officer. The Homes and Centres catered for during the year were:—

HOMES (*Full-time Medical Officer*)	CENTRES (*Part-time Medical Officer*)
Gimson School for Boys.	Children's Social Centres at:—
Perak House.	Government House.
Girls' Home, Mount Emily.	Sims Avenue (2 Centres).
Girls' Homecraft Centre, York Hill.	Bukit Panjang.
Children's Home, New Market Road.	Jalan Eunos.
Nantina Home.	Tessensohn Road.
Bushey Park Home.	Mount Erskine.
Prince Edward Road Hostel.	Clyde Terrace.
Queen Street Hostel.	Pasir Panjang.
Bukit Batok Hostel.	Upper Serangoon.
	Siglap.
	Joo Chiat.
	Havelock Road.
	Prinsep Road.
	Keppel Harbour.
	Victoria Street Creche.
	Havelock Road Creche.
	Mt. Erskine Creche.
	Buona Vista.

APPENDICES

APPENDIX I

FINANCIAL STATEMENT FOR THE YEAR 1958

Receipts	$ c.	$ c.
Licence Fees	20,543 00	
Health Branch (Quarantine and other charges) ..	193,676 85	
Medical Stores Sales	196,985 75	
Miscellaneous receipts	35,680 00	
Hospitals Board (Fees, etc.)	1,517,873 88	
Balance of cost borne by public revenue	33,521,193 55	
Total ..	35,485,953 03	

Expenditure	$ c.	$ c.
Personal Emoluments:		
General	2,128,200 00	
Health Branch	2,099,632 82	
Hospitals and Dispensaries ..	14,785,335 88	
		19,013,168 70
Annually Recurrent Expenditure:		
General	630,248 00	
Health Branch	946,046 76	
Hospitals and Dispensaries ..	6,980,750 06	
		8,557,044 82
Special Expenditure:		
General	56,867 66	
Health Branch	41,293 18	
Hospitals and Dispensaries ..	547,288 20	
		645,449 04
Development and Capital Expenditure ..		7,270,290 05
Total ..		35,485,952 61

APPENDIX II

IN-PATIENTS ALL HOSPITALS FOR THE YEAR 1958

The following table shows the hospitals maintained by the Medical Department, Singapore, the daily average number of patients in each, the number of patients admitted during the year, the total number of patients treated, the number of deaths and the death rate per hundred treated. (The Quarantine Hospital and Leper Settlement are not included).

Hospitals	Average No. of patients	Admissions during the year	CASES TREATED DURING THE YEAR			Deaths	Mortality per cent
			Male	Female	Total		
General Hospital	1,000.39	35,893	24,129	12,723	36,852	2,739	7.43
T.T.S. Hospital (T.B. and General) ..	861.53	3,169	3,025	908	3,933	265	6.74
K.K.M. Hospital (Maternity and Gynæcology)	296.00	39,480	..	39,761	39,761	60	.15
Police Headquarters, Thomson Road ..	6.96	290	294	..	294	..	..
H.M. Prison, Outram Road	83.40	1,200	1,272	..	1,272	9	.70
H.M. Prison, Changi	27.00	345	366	..	366	..	..
Woodbridge Hospital	1,891.00	1,552	2,320	1,501	3,821	78	2.04
St. Andrew's Orthopædic Hospital ..	113.04	139	128	123	251	..	..
Social Hygiene Hospital	32.50	1,125	302	850	1,152	2	.17
Middleton Hospital	151.00	3,679	2,226	1,554	3,780	83	2.19
Opium Treatment Centre, St. Johns Island ..	9.41	453	469	..	469	..	..
Total including 354 transfers and 1 healthy person admitted to hospital to accompany children or friends	..	87,325	34,531	57,420	91,951	3,236	3.52

N.B.—Total cases treated in 1957: 85,880.

APPENDIX III

OUT-PATIENTS

Total Attendances at Government Out-Patient Clinics during the year 1958, were distributed as follows:—

Hospitals	New Cases	Repetitions	Total Attendances
General Hospital	331,163	700,802	1,031,965
In addition M.O. i/c Officials	6,402	..	6,402
In addition Dressings and Injections (O.P.D.)	..	291,947	291,947
K.K.M. Hospital — Anti-Natal and Post-Natal	59,217	91,035	150,252
K.K.M. Hospital — O.P.D. Women and Children	25,015	68,353	93,368
T.T.S. Hospital — General	4,484	19,461	23,945
T.T.S. Hospital — Rotary	2,790	364,272	367,062
Social Hygiene Hospital	34,861	162,472	197,333
Police Depot Thomson Road	3,361	8,288	11,649
Woodbridge Hospital	567	3,635	4,202
School Clinics — North Canal	45,209	61,319	106,528
School Clinics — Paya Lebar			
School Clinics — Telok Kurau			
School Clinics — Chest Clinics			
Total ..	513,069	1,771,584	2,284,653

APPENDIX III—*continued*

STATIC, TRAVELLING AND FLOATING DISPENSARIES

	New Cases	Repetitions	Total Attendances
Paya Lebar O.D.D.	15,821	48,567	64,388
Bukit Timah O.D.D.	10,409	15,056	25,465
Bukit Panjang O.D.D.	10,599	23,214	33,813
Holland Road O.D.D.	2,836	3,611	6,447
Thomson Road O.D.D.	6,600	13,342	19,942
Pasir Panjang O.D.D.	5,577	17,794	23,371
Kallang O.D.D.	48,856	56,693	105,549
Kampong Batak Clinic	388	2,904	3,292
Changi Clinic	568	3,139	3,707
Travelling Dispensaries 1, 2, 3 and 4	48,054	74,053	122,107
Gulega Road Clinic	1,654	2,209	3,863
Pulau Brani	1,338	7,455	8,793
Pulau Tekong	1,493	5,714	7,207
Floating Dispensary	2,314	4,947	7,261
Total ..	156,507	278,698	435,205

Excluding the Prisons, St. John's Island, Maternity and Child Welfare Clinics.

APPENDIX IV

HOSPITALS, COLONY OF SINGAPORE, IN-PATIENTS

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958

According to the Intermediate List adapted for use in Singapore, of the 1948 (6th) International List of Diseases and Causes of Death

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		I.—*Infective and Parasitic Diseases*					
A 1	001–008	Tuberculosis of respiratory system ..	712	3,225	239	3,937	937
A 2	010	Tuberculosis of meninges and central nervous system	15	78	30	93	10
A 3	011	Tuberculosis of intestines, peritoneum and mesenteric glands	1	41	5	42	..
A 4		Tuberculosis of bones and joints:—					
(*a*)	012.0, 013.0	Tuberculosis of the vertebral column ..	107	297	3	404	79
(*b*)	012, 013 except 012.0, 013.0	Tuberculosis of other bones and joints	69	223	1	292	70
A 5		Tuberculosis, all other forms:—					
(*a*)	014	Tuberculosis of skin and subcutaneous cellular tissue	..	5	..	5	..
(*b*)	015	Tuberculosis of lymphatic system ..	3	53	1	56	1
(*c*)	016	Tuberculosis of genito-urinary system	2	27	1	29	1
(*d*)	017	Tuberculosis of adrenal glands ..	1	9	..	10	..
(*e*)	018	Tuberculosis of other organs ..	1	15	2	16	3
(*f*)	019	Disseminated tuberculosis ..	8	30	6	38	11
		Carried forward ..	919	4,003	288	4,922	1,112

The headings are taken from the Intermediate List of 150 Causes for Tabulation of Morbidity and Mortality as published in the "Manual of the International Statistical Classification of Diseases, Injuries and Causes of Death" (Sixth Revision of the International Lists of Diseases and Causes of Death, 1948).

Reference should be made to the Detailed List of the Diseases published on pages 45 to 321 of Volume I of the above Manual whenever there is any doubt about the entry in the list.

* *i.e.* the year previous to that for which the return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

‡ The figures in this column to be carried on to the next year's Return.

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	919	4,003	288	4,922	1,112
		I.—*Infective and Parasitic Diseases —contd.*					
A 6	020	Congenital syphilis	2	39	3	41	..
A 7		Early Syphilis:—					
(*a*)	021.0, 021.1	Primary syphilis	..	3	..	3	..
(*b*)	021.2	Secondary syphilis	..	4	..	4	..
(*c*)	021.3	Early syphilis, relapse following treatment	..	..	..	..	..
(*d*)	021.4	Early syphilis (unspecified stage) ..	3	47	..	50	1
A 8	024	Tabes dorsalis	1	23	..	24	1
A 9	025	General paralysis of insane ..	1	16	1	17	1
A 10		All other syphilis:—					
(*a*)	022	Aneurysm of aorta	..	26	2	26	..
(*b*)	023	Other cardiovascular syphilis ..	..	54	11	54	..
(*c*)	026	Other syphilis of central nervous system	2	23	4	25	2
(*d*)	027	Other forms of late syphilis ..	1	3	2	4	..
(*e*)	028	Latent syphilis	1	222	..	223	..
(*f*)	029	Syphilis, unqualified	..	19	1	19	..
A 11		Gonococcal infections:—					
(*a*)	030	Acute or unspecified gonorrhœa ..	..	63	..	63	..
(*b*)	031	Chronic gonococcal infection of genito-urinary system	..	..	..	..	..
(*c*)	032	Gonococcal infection of joint ..	..	4	..	4	2
(*d*)	033	Gonococcal infection of eye ..	..	43	..	43	3
(*e*)	034–035	Gonococcal infection of other sites ..	..	4	..	4	..
		Carried forward ..	930	4,596	312	5,526	1,122

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	930	4,596	312	5,526	1,122
		I.—*Infective and Parasitic Diseases —contd.*					
A 12	040	Typhoid fever	13	217	8	230	9
A 13		Paratyphoid fever and other Salmonella infections:—					
(*a*)	041	Paratyphoid fever A, B or C ..	..	2	..	2	..
(*b*)	042	Other Salmonella infections ..	..	1	..	1	..
A 14	043	Cholera	..	..	..	..	..
A 15	044	Brucellosis (undulant fever) ..	..	..	..	..	..
A 16		Dysentery, all forms:—					
(*a*)	045	Bacillary dysentery	1	72	1	73	..
(*b*)	046	Amœbiasis	10	283	7	293	7
(*c*)	047–048	Other protozoal and unspecified forms of dysentery	2	114	1	116	..
A 17	050	Scarlet fever	..	1	..	1	..
A 18	051	Streptococcal sore throat	..	1	..	1	..
A 19	052	Erysipelas	..	11	..	11	..
A 20	053	Septicæmia and pyæmia	1	45	31	46	..
A 21	055	Diphtheria	44	880	38	924	30
A 22	056	Whooping Cough	..	85	1	85	..
A 23	057	Meningococcal infections	..	2	..	2	..
A 24	058	Plague:—					
(*a*)	058.0	Bubonic Plague	..	..	..	..	..
(*b*)	058.1	Pneumonic Plague	..	..	..	..	..
(*c*)	058.2	Other Plague	..	..	..	..	..
A 25	060	Leprosy	5	36	..	41	12
		Carried forward ..	1,006	6,346	399	7,352	1,180

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,006	6,346	399	7,352	1,180
		I.—*Infective and Parasitic Diseases —contd.*					
A 26	061	Tetanus:—					
(*a*)		Tetanus of the new-born ..	1	9	7	10	..
(*b*)		Tetanus, other forms	5	76	31	81	1
A 27	062	Anthrax	..	..	..	..	..
A 28	080	Acute Poliomyelitis	20	409	12	429	146
A 29	082	Acute infectious encephalitis ..	..	5	1	5	..
A 30	081, 083	Late effects of acute poliomyelitis and acute infectious encephalitis ..	10	158	..	168	74
A 31	084	Small-pox	..	..	..	..	..
A 32	085	Measles	4	413	12	417	1
A 33	091	Yellow fever	..	..	..	..	..
A 34	092	Infectious hepatitis	13	444	14	457	9
A 35	094	Rabies	..	..	..	..	..
A 36		Typhus and other rickettsial diseases:—					
(*a*)	100	Louse-borne epidemic typhus ..	..	..	..	..	..
(*b*)	101	Flea-borne endemic typhus (murine) ..	..	2	..	2	..
(*c*)	104	Tick-borne epidemic typhus ..	..	..	..	..	..
(*d*)	105	Mite-borne typhus	..	2	..	2	..
(*e*)	102–103 106–108	Other and unspecified typhus ..	1	13	..	14	..
		Carried forward ..	1,060	7,877	476	8,937	1,411

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,060	7,877	476	8,937	1,411
		I.—*Infective and Parasitic Diseases —contd.*					
A 37		Malaria:—					
(*a*)	110	Vivax malaria (benign tertian) ..	1	22	..	23	..
(*b*)	111	Malariæ malaria (quartan) ..	..	1	1	1	..
(*c*)	112	Falciparum malaria (malignant tertian)	1	16	..	17	..
(*d*)	114	Mixed malaria infections ..	..	1	..	1	..
(*e*)	115	Blackwater fever	..	2	..	2	..
(*f*)	113, 116–117	Other and unspecified forms of malaria	..	11	..	11	1
A 38		Schistosomiasis:—					
(*a*)	123.0	Schistosomiasis vesical (S. hæmatobium)	..	..	..	..	..
(*b*)	123.1	Schistosomiasis intestinal (S. Mansoni)	..	..	..	..	..
(*c*)	123.2	Schistosomiasis Pulmonary (S. Japonicum)	..	..	..	..	..
(*d*)	123.3	Other and unspecified Schistosomiasis	..	..	..	..	..
A 39	125	Hydatid disease	..	2	..	2	..
A 40	127	Filariasis	..	35	..	35	..
A 41	129	Ankylostomiasis	3	76	..	79	..
A 42		Other diseases due to helminths:—					
(*a*)	124	Other trematode infestation ..	..	..	..	..	..
(*b*)	126	Tape worm (infestation) and other cestode infestation	1	3	..	4	..
		Carried forward ..	1,066	8,046	477	9,112	1,412

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,066	8,046	477	9,112	1,412
A 42		I.—*Infective and Parasitic Diseases —contd.*					
(*c*)	128	Trichiniasis	..	1	..	1	..
(*d*)	130.0	Ascariasis	..	49	3	49	1
(*e*)	130.1–130.3	Other diseases due to helminths ..	..	36	..	36	..
A 43		All other diseases classified as infective and parasitic:—					
(*a*)	036	Chancroid	..	2	..	2	..
(*b*)	037	Lymphogranuloma Venereum ..	..	6	..	6	..
(*c*)	038	Granuloma inguinale, venereal ..	..	2	..	2	..
(*d*)	039	Other and unspecified venereal diseases	1	14	..	15	..
(*e*)	049	Food poisoning (infection and intoxication)	..	65	..	65	..
(*f*)	059	Tularæmia	..	..	..	..	..
(*g*)	063	Gas Gangrene	..	2	..	2	..
(*h*)	064.2	Glanders	..	..	..	..	..
(*i*)	064.3	Melioidosis	..	..	..	..	..
(*j*)	046.0, 064.1 064.4	Other bacterial diseases	..	3	1	3	..
(*k*)	070	Vincent's infection	..	2	1	2	..
(*l*)	071	Relapsing fever	..	..	..	..	..
(*m*)	072	Leptospirosis icterohæmorrhagica (Weil's disease)	2	18	4	20	1
		Carried forward ..	1,069	8,246	486	9,315	1,414

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,069	8,246	486	9,315	1,414
		I.—*Infective and Parasitic Diseases —contd.*					
A 43 (*n*)	073	Yaws	..	2	..	2	1
(*o*)	086	Rubella (German measles) ..	..	9	..	9	..
(*p*)	087	Chicken-pox	13	482	1	495	..
(*q*)	088	Herpes Zoster	1	22	..	23	1
(*r*)	089	Mumps	..	58	..	58	..
(*s*)	090	Dengue	1	128	..	129	1
(*t*)	093	Glandular fever	..	8	..	8	..
(*u*)	095	Trachoma	..	8	..	8	..
(*v*)	096.7	Sandfly fever	..	1	..	1	..
(*w*)	120	Leishmaniasis	..	..	..	..	..
(*x*)	121.0	Trypanosomiasis gambiensis ..	..	..	..	..	..
(*y*)	121.0	Trypanosomiasis rhodesiensis ..	..	..	..	..	..
(*z*)	121	Other and unspecified trypanosomiasis					
(*A*)	131	Dermatophytosis	..	3	..	3	..
(*B*)	132	Actinomycosis	..	..	..	..	..
(*C*)	133, 134	Other fungus infections	..	25	..	25	..
(*D*)	135	Scabies	..	10	..	10	..
(*E*)	054, 074 096.1–096.6 096.8, 096.9 122 136–138	All other diseases classified as infective and parasitic	..	11	..	11	..
		Carried forward ..	1,084	9,013	487	10,097	1,417

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,084	9,013	487	10,097	1,417
		II.—*Neoplasms*					
A 44	140–148	Malignant neoplasm of buccal cavity and pharynx	8	126	32	134	7
A 45	150	Malignant neoplasm of œsophagus ..	9	102	36	111	6
A 46	151	Malignant neoplasm of stomach ..	3	216	62	219	8
A 47		Malignant neoplasm of intestine except rectum:—					
(*a*)	152	Malignant neoplasm of small intestine, including duodenum	..	9	1	9	..
(*b*)	153	Malignant neoplasm of large intestine, except rectum	1	43	11	44	6
A 48	154	Malignant neoplasm of rectum ..	7	54	12	61	1
A 49	161	Malignant neoplasm of larynx ..	3	40	9	43	4
A 50	162–163	Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	8	202	62	210	8
A 51	170	Malignant neoplasm of breast ..	3	75	7	78	2
A 52	171	Malignant neoplasm of cervix uteri ..	3	303	8	306	2
A 53	172–174	Malignant neoplasm of other and unspecified parts of uterus ..	..	36	3	36	..
A 54	177	Malignant neoplasm of prostate ..	..	27	2	27	2
A 55	190–191	Malignant neoplasm of skin ..	1	22	4	23	..
A 56	196–197	Malignant neoplasm of bone and connective tissue	1	33	5	34	2
		Carried forward ..	1,131	10,301	741	11,432	1,465

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,131	10,301	741	11,432	1,465
		II.—*Neoplasms—contd.*					
A 57		Malignant neoplasm of all other and unspecified sites:—					
	(*a*) 155–156	Malignant neoplasm of liver ..	3	113	45	116	5
	(*b*) 157	Malignant neoplasm of pancreas ..	1	19	8	20	..
	(*c*) 158	Malignant neoplasm of peritoneum ..	..	6	3	6	..
	(*d*) 159	Malignant neoplasm of unspecified digestive organs	..	1	..	1	..
	(*e*) 175–176	Malignant neoplasm of other and unspecified female genital organs ..	..	20	8	20	..
	(*f*) 178–179	Malignant neoplasm of other and unspecified male genital organs ..	..	16	1	16	1
	(*g*) 180–181	Malignant neoplasm of kidney, bladder and other urinary organs ..	..	25	1	25	1
	(*h*) 160, 164–165, 192–195, 198–199	Malignant neoplasm of all other and unspecified sites	2	69	15	71	4
A 58	204	Leukæmia and Aleukæmia ..	6	95	35	101	6
A 59		Lymphosarcoma and other neoplasms of lymphatic and hæmatopoietic system:—					
	(*a*) 200	Lymphosarcoma and reticulosarcoma	..	20	5	20	1
	(*b*) 201	Hodgkin's disease	..	17	3	17	1
		Carried forward ..	1,143	10,702	865	11,845	1,484

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,143	10,702	865	11,845	1,484
		II.—*Neoplasms—contd.*					
A 59 (*c*)	202–203 }	Other neoplasm of lymphatic and haematopoietic system	..	9	2	9	..
A 60	205 }	Benign neoplasms and neoplasms of unspecified nature:—					
(*a*)	210–211	Benign neoplasm of buccal cavity, pharynx and digestive system ..	6	35	..	41	..
(*b*)	213–217	Benign neoplasm of female genital organs	6	442	3	448	9
(*c*)	218	Benign neoplasm of male genital organs	..	4	..	4	..
(*d*)	212 }	Benign neoplasm of other and unspecified organs and tissue ..	4	375	..	379	4
	219–229 }						
(*e*)	230	Neoplasm of unspecified nature of digestive organs	..	2	..	2	..
(*f*)	233–235	Neoplasm of unspecified nature of other female genital organs	1	..	..	1	..
(*g*)	231–232 }	Neoplasm of unspecified nature of other unspecified organs	18	106	13	124	14
	236–239 }						
		Carried forward ..	1,178	11,675	883	12,853	1,511

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,178	11,675	883	12,853	1,511
		III.—*Allergic, Endocrine System, Metabolic and Nutritional Diseases*					
		IV.—*Diseases of the Blood and Blood-Forming Organs*					
A 61	250, 251	Nontoxic goitre	4	101	..	105	1
A 62	252	Thyrotoxicosis with or without goitre ..	9	97	4	106	5
A 63	260	Diabetes mellitus	17	302	8	319	15
A 64		Avitaminosis and other deficiency states:—					
(*a*)	280	Beri-Beri	..	36	8	36	1
(*b*)	281	Pellagra	..	3	1	3	..
(*c*)	282	Scurvy	1	13	..	14	..
(*d*)	283–284	Rickets	1	14	..	15	..
(*e*)	285	Osteomalacia	..	..	..	..	..
(*f*)	286.0	Steatorrhœa and Sprue	..	..	..	..	..
(*g*)	286.5	Malnutrition-unqualified	7	92	19	99	9
(*h*)	286.1–286.4, 286.6	Other avitaminoses and nutritional deficiency states	..	24	..	24	..
		Carried forward ..	1,217	12,357	923	13,574	1,542

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,217	12,357	923	13,574	1,542
		IV.—*Diseases of the Blood and Blood-Forming Organs—contd.*					
A 65		Anæmias:—					
	(*a*) 290	Pernicious and other hyperchromic anæmias	..	11	..	11	..
	(*b*) 291	Iron deficiency anæmias (hypochromic)	..	51	..	51	..
	(*c*) 292–293	Other specified and unspecified anæmias	16	253	27	269	13
A 66		Allergic disorders; all other endocrine metabolic and blood diseases:—					
	(*a*) 241	Asthma	11	677	10	688	13
	(*b*) 240, 242–245	Angioneurotic œdema, urticaria and other allergic disorders ..	4	160	2	164	2
	(*c*) 253	Myxœdema and cretinism ..	2	25	1	27	2
	(*d*) 254	Other diseases of thyroid gland ..	..	5	..	5	..
	(*e*) 270	Disorders of pancreatic internal secretion other than diabetes mellitus ..	..	5	1	5	..
	(*f*) 271	Diseases of parathyroid gland ..	..	3	1	3	..
	(*g*) 272	Diseases of pituitary gland ..	..	5	..	5	..
	(*h*) 273	Diseases of thymus gland ..	..	..	..	..	..
	(*i*) 274	Diseases of adrenal gland ..	..	1	1	1	..
	(*j*) 275–277	Other diseases of endocrine glands ..	..	4	..	4	1
	(*k*) 288	Gout	..	6	..	6	1
	(*l*) 287, 289	Other metabolic diseases ..	..	20	..	20	..
	(*m*) 294	Polycythemia	..	3	..	3	..
		Carried forward ..	1,250	13,586	966	14,836	1,574

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	1,250	13,586	966	14,836	1,574
		IV.—*Diseases of the Blood and Blood-Forming Organs—contd.*					
A 66 (*n*)	295	Hæmophilia	..	21	..	21	3
(*o*)	296	Purpura and other hæmorrhagic conditions	4	67	3	71	3
(*p*)	297	Agranulocytosis	..	..	..	..	..
(*q*)	298	Diseases of spleen	..	14	3	14	..
(*r*)	299	Other diseases of blood and blood-forming organs	..	21	2	21	..
		V.—*Mental, Psychoneurotic and Personality Disorders*					
A 67		Psychoses:—					
(*a*)	300	Schizophrenic disorders (dementia præcox)	853	356	20	1,209	590
(*b*)	301	Maniac-depressive reaction ..	558	501	16	1,059	399
(*c*)	302	Involutional melancholia ..	40	21	2	61	27
(*d*)	303	Paranoia and paranoid states ..	34	13	1	47	16
(*e*)	304	Senile psychoses	108	98	14	206	184
(*f*)	305–309	Other and unspecified psychoses ..	668	264	19	932	170
		Carried forward ..	3,515	14,962	1,046	18,477	2,966

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,515	14,962	1,046	18,477	2,966
		V.—*Mental, Psychoneurotic and Personality Disorders—contd.*					
A 68		Psychoneuroses and disorders of personality:—					
(*a*)	311	Hysterical reaction	3	85	1	88	5
(*b*)	314	Neurotic-depressive reaction ..	..	93	..	93	75
(*c*)	322	Alcholism	2	59	..	61	1
(*d*)	323	Other drug addiction	30	1,246	..	1,276	15
(*e*)	310, 312–313 315–321, 324 326	Other pyschoneuroses and disorders of personality	2	93	..	95	19
A 69	325	Mental deficiency	7	242	5	249	159
		VI.—*Diseases of the Nervous System and Sense Organs*					
A 70		Vascular lesions affecting central nervous system:—					
(*a*)	331	Cerebral hæmorrhage	6	158	124	164	5
(*b*)	332	Cerebral embolism and thrombosis ..	13	178	36	191	14
(*c*)	330 333–334	Other vascular lesions affecting central nervous system	4	42	10	46	2
		Carried forward ..	3,582	17,158	1,222	20,740	3,261

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,582	17,158	1,222	20,740	3,261
		VI.—*Diseases of the Nervous System and Sense Organs—contd.*					
A 71	340	Non-meningococcal meningitis	..	113	41	113	9
A 72	345	Multiple sclerosis	..	4	..	4	..
A 73	353	Epilepsy	1	157	..	158	3
A 74		Inflammatory diseases of eye:—					
(*a*)	370	Conjunctivitis and ophthalmia ..	..	40	..	40	..
(*b*)	371–379	Other inflammatory diseases of eye ..	16	282	..	298	8
A 75	385	Cataract	17	442	1	459	20
A 76	387	Glaucoma	12	116	..	128	7
A 77		Otitis media and mastoiditis:—					
(*a*)	390	Otitis externa	..	35	..	35	1
(*b*)	391–393	Otitis media and mastoiditis ..	4	143	5	147	3
(*c*)	394	Other inflammatory diseases of ear ..	3	27	..	30	2
A 78		All other diseases of the nervous system and sense organs:—					
(*a*)	380–384, 386, 388, 389	All other diseases and conditions of eye	22	270	..	292	18
		Carried forward ..	3,657	18,787	1,269	22,444	3,332

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,657	18,787	1,269	22,444	3,332
		VI. *Diseases of the Nervous System and Sense Organs—contd.*					
A 78 (*b*)	342	Intracranial and intraspinal abscess ..	1	15	9	16	3
(*c*)	343	Encephalitis, myelitis and encephalomyelitis	6	228	63	234	12
(*d*)	350	Paralysis agitans	4	14	2	18	4
(*e*)	352	Other cerebral paralysis	30	63	1	93	34
(*f*)	356	Motor neuron disease and muscular atrophy	..	10	..	10	2
(*g*)	357	Other diseases of spinal cord ..	1	3	..	4	1
(*h*)	366	Other and unspecified forms of neuralgia and neuritis	2	55	..	57	2
(*i*)	367	Other diseases of cranial nerves ..	..	2	..	2	..
(*j*)	369	Diseases of peripheral autonomic nervous system	..	2	..	2	..
(*k*)	341, 344 351, 354 355 360–365 368 395–398	All other diseases of the nervous system and sense organs	5	119	1	124	2
		Carried forward ..	3,706	19,298	1,345	23,004	3,392

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,706	19,298	1,345	23,004	3,392
		VII.—*Diseases of the Circulatory System*					
A 79		Rheumatic fever:—					
(*a*)	400	Rheumatic fever without mention of heart involvement	8	133	3	141	11
(*b*)	401	Rheumatic fever with heart involvement	..	114	8	114	2
(*c*)	402	Chorea	..	9	..	9	..
A 80		Chronic rheumatic heart disease:—					
(*a*)	410–413	Diseases of valves specified as rheumatic	..	152	17	152	..
(*b*)	414	Other endocarditis specified as rheumatic	..	6	1	6	..
(*c*)	415	Other myocarditis specified as rheumatic	..	1	1	1	..
(*d*)	416	Other heart disease specified as rheumatic	2	18	5	20	3
A 81		Arteriosclerotic and degenerative heart disease:—					
(*a*)	420	Arteriosclerotic heart disease, including coronary disease	9	336	82	345	25
(*b*)	421	Chronic endocarditis not specified as rheumatic	22	215	32	237	12
		Carried forward ..	3,747	20,282	1,494	24,029	3,445

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,747	20,282	1,494	24,029	3,445
		VII.—*Diseases of the Circulatory System —contd.*					
A 81 (*c*)	422	Other myocardial degeneration ..	..	6	3	6	1
A 82		Other diseases of heart:—					
(*a*)	430	Acute and subacute endocarditis ..	1	29	7	30	..
(*b*)	431	Acute myocarditis not specified as rheumatic	1	17	7	18	..
(*c*)	432	Pericarditis not specified as rheumatic	..	8	1	8	1
(*d*)	433	Functional disease of heart ..	1	23	2	24	..
(*e*)	434	Other and unspecified diseases of heart	5	135	38	140	6
A 83	440–443	Hypertension with heart disease ..	11	275	49	286	12
A 84	444–447	Hypertension without mention of heart	10	366	35	376	28
A 85		Diseases of arteries:—					
(*a*)	450	General arteriosclerosis	..	10	2	10	1
(*b*)	451	Aortic aneurysm specified as non-syphilitic and dissecting aneurysm ..	2	15	8	17	..
(*c*)	452	Other aneurysm, except of heart and aorta	1	15	2	16	..
(*d*)	453	Peripheral vascular disease ..	3	33	..	36	5
(*e*)	454	Arterial embolism and thrombosis ..	..	6	..	6	..
(*f*)	455	Gangrene of unspecified cause ..	4	19	..	23	5
		Carried forward ..	3,786	21,239	1,648	25,025	3,504

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,786	21,239	1,648	25,025	3,504
		VII.—*Diseases of the Circulatory System —contd.*					
A 85 (*g*)	456	Other diseases of arteries ..	..	19	1	19	..
A 86		Other diseases of circulatory system:—					
(*a*)	460, 462	Varicose veins	..	64	..	64	1
(*b*)	461	Hæmorrhoids	4	589	1	593	8
(*c*)	463–464	Phlebitis and thrombophlebitis ..	1	26	..	27	..
(*d*)	465	Pulmonary embolism and infarction ..	..	4	..	4	..
(*e*)	466	Other venous embolism and thrombosis	1	20	..	21	..
(*f*)	467	Other diseases of circulatory system ..	..	13	2	13	..
(*g*)	468	Adenitis, Lymphadenitis, and other diseases of lymph nodes and lymph channels	4	79	..	83	3
		VIII.—*Diseases of the Respiratory System*					
A 87		Acute upper respiratory infections:—					
(*a*)	470	Acute nasopharyngitis (common cold)	..	53	..	53	..
		Carried forward ..	3,796	22,106	1,652	25,902	3,516

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,796	22,106	1,652	25,902	3,516
		VIII.—*Diseases of the Respiratory System —contd.*					
A 87 (*b*)	471	Acute sinusitis	..	21	..	21	..
(*c*)	472	Acute pharyngitis	3	878	..	881	2
(*d*)	473	Acute tonsillitis	5	645	..	650	10
(*e*)	474	Acute laryngitis and tracheitis ..	2	36	6	38	2
(*f*)	475	Acute upper respiratory infection of multiple or unspecified sites ..	2	23	..	25	1
A 88	480–483	Influenza	..	73	1	73	..
A 89	490	Lobar Pneumonia	12	315	54	327	1
A 90	491	Broncho-pneumonia	10	1,410	393	1,420	15
A 91	492–493	Primary atypical, other and unspecified pneumonia	1	85	19	86	3
A 92	500	Acute bronchitis	4	120	3	124	..
A 93		Bronchitis, chronic and unqualified:—					
(*a*)	501	Bronchitis unqualified	2	312	..	314	..
(*b*)	502	Chronic bronchitis	2	58	4	60	1
A 94	510	Hypertrophy of tonsils and adenoids ..	3	636	1	639	..
A 95		Empyema and Abscess of lung:—					
(*a*)	518	Empyema	4	60	16	64	5
(*b*)	521	Abscess of lung	3	58	12	61	3
A 96	519	Pleurisy	9	130	1	139	22
		Carried forward ..	3,858	26,966	2,162	30,824	3,581

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,858	26,966	2,162	30,824	3,581
		VIII.—*Diseases of the Respiratory System —contd.*					
A 97		All other respiratory diseases:—					
(*a*)	517	Other diseases of upper respiratory tract	1	59	1	60	1
(*b*)	520	Spontaneous pneumothorax ..	1	53	7	54	10
(*c*)	522	Pulmonary congestion and hypostasis	..	2	2	2	..
(*d*)	525	Other chronic interstitial pneumonia ..	..	..	..	..	..
(*e*)	523	Pneumoconiosis	..	1	..	1	..
(*f*)	526	Bronchiectasis	7	316	3	323	8
(*g*)	511–516, 524, 527	All other respiratory diseases ..	3	407	14	410	1
		IX.—*Diseases of the Digestive System*					
A 98		Diseases of teeth and supporting structures:—					
(*a*)	530	Dental caries	..	16	..	16	..
(*b*)	532.0	Gingivitis	..	..	..	..	..
(*c*)	531.1, 532.2	Pyorrhœa	..	10	..	10	..
		Carried forward ..	3,870	27,830	2,189	31,700	3,601

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,870	27,830	2,189	31,700	3,601
		IX.—*Diseases of the Digestive System —contd.*					
A 98 (*d*)	531, 533–535	Other diseases of teeth and supporting structures	2	37	..	39	1
A 99	540	Ulcer of stomach	21	574	22	595	29
A 100	541	Ulcer of duodenum	8	286	10	294	13
A 101	543	Gastritis and duodenitis	1	108	..	109	3
A 102	550–553	Appendicitis	30	1,961	12	1,991	25
A 103		Intestinal obstruction and hernia:—					
(*a*)	560	Hernia of abdominal cavity without mention of obstruction ..	6	672	4	678	5
(*b*)	561	Hernia of abdominal cavity with obstruction	..	159	5	159	..
(*c*)	570.0	Intussusception	2	59	5	61	..
(*d*)	570.3	Volvulus	..	10	5	10	1
(*e*)	570.1, 570.2 570.4, 570.5	Other intestinal obstruction ..	3	108	24	111	3
A 104		Gastro-enteritis and colitis, except diarrhœa of the new born:—					
(*a*)	571.0	Gastro-enteritis and colitis, ages between four weeks and two years..	1	1,649	144	1,650	27
		Carried forward ..	3,944	33,453	2,420	37,397	3,708

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,944	33,453	2,420	37,397	3,708
		IX.—*Diseases of the Digestive System —contd.*					
A 104 (*b*)	571.1	Gastro-enteritis and colitis, ages two years and over	6	350	27	356	4
(*c*)	572	Chronic enteritis and ulcerative colitis	2	39	..	41	..
A 105		Cirrhosis of liver:—					
(*a*)	581.0	Cirrhosis of liver without mention of alcoholism	7	232	51	239	5
(*b*)	581.1	Cirrhosis of liver with alcoholism ..	..	13	2	13	..
A 106		Cholelithiasis and Cholecystitis:—					
(*a*)	584	Cholelithiasis	1	92	8	93	..
(*b*)	585	Cholecystitis without mention of calculi	10	314	6	324	5
A 107		Other diseases of Digestive System:—					
(*a*)	536	Stomatitis	..	33	..	33	..
(*b*)	537, 538	Other diseases of buccal cavity ..	..	52	1	52	1
(*c*)	539.0	Functional disorders of œsophagus ..	1	16	4	17	3
(*d*)	539.1	Stricture or obstruction of œsophagus	5	35	3	40	1
(*e*)	544	Disorders of function of stomach ..	..	10	..	10	..
(*f*)	542, 545	Other diseases of stomach and duodenum	3	43	2	46	2
		Carried forward ..	3,979	34,682	2,524	38,661	3,729

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	3,979	34,682	2,524	38,661	3,729
		IX.—*Diseases of the Digestive System —contd.*					
A 107 (*g*)	573.0	Constipation	..	30	..	30	1
(*h*)	573 except 573.0	Other functional disorders of intestines	..	10	..	10	..
(*i*)	574	Anal fissure and fistula	..	102	..	102	2
(*j*)	575	Abscess of anal and rectal regions ..	3	265	..	268	3
(*k*)	576	Peritonitis	3	59	26	62	1
(*l*)	577, 578	Other diseases of intestines and peritoneum	1	65	6	66	3
(*m*)	580	Acute yellow atrophy of liver ..	..	8	5	8	..
(*n*)	582, 583	Other diseases of liver	1	32	14	33	1
(*o*)	586	Other diseases of gall-bladder and biliary ducts	1	21	7	22	1
(*p*)	587	Diseases of pancreas	..	18	1	18	..
		X.—*Diseases of the Genito-Urinary System*					
A 108	590	Acute nephritis	33	452	3	485	14
A 109		Chronic, other and unspecified nephritis:—					
(*a*)	591	Nephritis with œdema, including nephrosis	11	182	6	193	6
		Carried forward ..	4,032	35,926	2,592	39,958	3,761

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,032	35,926	2,592	39,958	3,761
		X.—*Diseases of the Genito-Urinary System —contd.*					
A 109 (*b*)	592	Chronic nephritis	12	148	72	160	7
(*c*)	593	Nephritis not specified as acute or chronic	..	11	2	11	..
(*d*)	594	Other renal sclerosis	..	2	..	2	..
A 110	600	Infections of kidney	8	161	3	169	9
A 111		Calculi of urinary system:—					
(*a*)	602	Calculi of kidney and ureter ..	4	182	1	186	2
(*b*)	604	Calculi of other parts of urinary system	1	62	..	63	..
A 112	610	Hyperplasia of prostate	2	106	2	108	3
A 113	620, 621	Diseases of breast	1	110	..	111	3
A 114		Other diseases of genito-urinary system:—					
(*a*)	603	Other diseases of kidney and ureter ..	..	13	1	13	..
(*b*)	605	Cystitis	..	68	..	68	2
(*c*)	606	Other diseases of bladder ..	..	12	..	12	1
(*d*)	608	Stricture of urethra	1	54	1	55	..
(*e*)	609	Other diseases of urethra ..	1	36	..	37	1
(*f*)	612	Other diseases of prostate ..	..	3	..	3	..
(*g*)	613	Hydrocele	2	237	..	239	..
(*h*)	614	Orchitis and epididymitis ..	..	51	..	51	..
(*i*)	611, 615–617	Other diseases of male genital organs ..	..	234	2	234	..
(*j*)	622–624	Acute salpingitis and oophoritis ..	..	56	..	56	..
		Carried forward ..	4,064	37,472	2,676	41,536	3,789

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,064	37,472	2,676	41,536	3,789
		X.—*Diseases of the Genito-Urinary System —contd.*					
A 114 (*k*)	625	Other diseases of ovary and Fallopian tube	4	93	2	97	..
(*l*)	626	Diseases of parametrium and pelviperitoneum (female)	..	55	1	55	2
(*m*)	630	Infective disease of uterus, vagina and vulva	..	93	..	93	..
(*n*)	631–633	Other diseases of uterus	..	206	..	206	6
(*o*)	634	Disorders of menstruation ..	..	244	..	244	1
(*p*)	635–637	Other diseases of female genital organs	6	339	..	345	2
(*q*)	601, 607	All other diseases of the genito-urinary system	1	87	1	88	2
		XI.—*Deliveries and Complications of Pregnancy, Childbirth and the Puerperium*					
A 115		Sepsis of pregnancy, childbirth and the puerperium:—					
(*a*)	640	Pyelitis and pyelonephritis of pregnancy	..	107	..	107	1
(*b*)	641	Other infections of genito-urinary tract during pregnancy	..	..	..	..	..
(*c*)	681	Sepsis of childbirth and the puerperium	..	106	5	106	1
		Carried forward ..	4,075	38,802	2,685	42,877	3,804

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,075	38,802	2,685	42,877	3,804
		XI.—*Deliveries and Complications of Pregnancy, Childbirth and the Puerperium —contd.*					
A 115 (*d*)	682	Puerperal phlebitis and thrombosis ..	..	3	..	3	..
(*e*)	684	Puerperal pulmonary embolism ..	..	..	..	..	..
A 116		Toxæmias of pregnancy and the puerperium:—					
(*a*)	642.2	Pre-eclampsia of pregnancy ..	20	1,280	1	1,300	26
(*b*)	642.3	Eclampsia of pregnancy	2	59	5	61	3
(*c*)	642.4	Hyperemesis gravidarum ..	..	95	..	95	3
(*d*)	642.5	Acute yellow atrophy of liver of pregnancy	..	3	3	3	..
(*e*)	642.5	Other toxæmias of pregnancy ..	..	1	..	1	..
(*f*)	652	Abortion with toxæmia, without mention of sepsis	..	..	..	..	..
(*g*)	685	Puerperal eclampsia	..	9	..	9	..
(*h*)	686	Other forms of puerperal toxæmia ..	..	1	..	1	..
A 117		Hæmorrhage of pregnancy and childbirth:—					
(*a*)	643	Placenta prævia	..	114	..	114	..
(*b*)	644	Other hæmorrhage of pregnancy ..	..	25	5	25	..
		Carried forward ..	4,097	40,392	2,699	44,489	3,836

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,097	40,392	2,699	44,489	3,836
		XI.—*Deliveries and Complications of Pregnancy, Childbirth and the Puerperium —contd.*					
A 117	(*c*) 670	Delivery complicated by placenta prævia or antepartum hæmorrhage ..	10	318	..	328	8
	(*d*) 671	Delivery complicated by retained placenta	4	613	..	617	3
	(*e*) 672	Delivery complicated by other postpartum hæmorrhage	6	2,356	14	2,362	24
A 118	650	Abortion without mention of sepsis or toxæmia	14	3,164	2	3,178	12
A 119	651	Abortion with sepsis	2	132	4	134	2
A 120		Other complications of pregnancy, childbirth and the puerperium:—					
	(*a*) 645	Ectopic pregnancy	1	158	..	159	2
	(*b*) 646	Anæmia of pregnancy	..	203	1	203	6
	(*c*) 683	Pyrexia of unknown origin during the puerperium	4	159	..	163	4
	(*d*) 688.1	Puerperal psychoses	1	8	..	9	..
	(*e*) 689	Mastitis and other disorders of lactation	..	38	..	38	1
		Carried forward ..	4,139	47,541	2,720	51,680	3,898

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,139	47,541	2,720	51,680	3,898
		XI.—*Deliveries and Complications of Pregnancy, Childbirth and the Puerperium —contd.*					
A 120 (*f*)	647–649 673–680 687 688.0 688.2–688.3	Other complications of pregnancy, childbirth and the puerperium ..	27	6,810	4	6,837	41
(*g*)	660	Delivery without complications ..	169	21,971	..	22,140	139
		XII.—*Diseases of the Skin and Cellular Tissue*					
		XIII.—*Diseases of the Bones and Organs of Movement*					
A 121		Infections of skin and subcutaneous tissue:—					
(*a*)	690	Boil and carbuncle	1	137	..	138	5
(*b*)	691–693	Cellulitis and abscess	15	900	3	915	21
(*c*)	694–698	Other infections of skin and subcutaneous tissue	20	833	1	853	33
		Carried forward ..	4,371	78,192	2,728	82,563	4,137

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,371	78,192	2,728	82,563	4,137
		XIII.—*Diseases of the Bones and Organs of Movement—contd.*					
A 122		Arthritis and spondylitis:—					
	(*a*) 720	Acute arthritis due to pyogenic organisms	2	26	1	28	4
	(*b*) 721	Acute nonpyogenic arthritis ..	..	4	..	4	1
	(*c*) 722	Rheumatoid arthritis and allied conditions	6	85	1	91	5
	(*d*) 723–725	Arthritis specified and unspecified ..	10	74	1	84	10
A 123		Muscular rheumatism and rheumatism, unspecified:—					
	(*a*) 726	Muscular rheumatism	6	8	..	14	..
	(*b*) 727	Rheumatism unspecified ..	..	3	..	3	..
A 124	730	Osteomyelitis and periostitis ..	16	127	..	143	14
A 125		Ankylosis and acquired musculoskeletal deformities:—					
	(*a*) 737	Ankylosis of joint	1	5	..	6	..
	(*b*) 745–749	Other acquired musculoskeletal deformities	..	60	..	60	5
A 126		All other diseases of skin and musculoskeletal system:—					
	(*a*) 715	Chronic ulcer of skin (including tropical ulcer)	5	64	..	69	7
		Carried forward ..	4,417	78,648	2,731	83,065	4,183

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,417	78,648	2,731	83,065	4,183
		XIII.—*Diseases of the Bones and Organs of Movement—contd.*					
A 126 (*b*)	700–714, 716	All other diseases of skin and subcutaneous tissue	8	269	3	277	11
(*c*)	731–736, 738–744	All other diseases of musculoskeletal system	5	219	1	224	1
		XIV.—*Congenital Malformations*					
A 127	751	Spina bifida and meningocele ..	..	20	1	20	..
A 128	754	Congenital malformation of circulatory system	4	249	64	253	11
A 129		All other congenital malformations:—					
(*a*)	750	Monstrosity	..	..	..	..	..
(*b*)	752	Congenital hydrocephalus ..	1	26	7	27	2
(*c*)	753	Other congenital malformations of nervous system and sense organs ..	..	8	1	8	..
(*d*)	755	Cleft palate and harelip	12	134	..	146	..
		Carried forward ..	4,447	79,573	2,808	84,020	4,208

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,447	79,573	2,808	84,020	4,208
		XIV.—*Congenital Malformations—contd.*					
A 129 (*e*)	756.0	Congenital hypertrophic pyloric stenosis	1	9	..	10	..
(*f*)	756.1	Imperforate anus	2	12	6	14	..
(*g*)	756.2	Other congenital malformations of digestive system	1	33	5	34	1
(*h*)	757	Congenital malformations of genito-urinary system	..	38	1	38	..
(*i*)	758	Congenital malformations of bone and joint	1	17	..	18	1
(*j*)	759	Other and unspecified congenital malformations, not elsewhere classified	1	51	7	52	..
		XV.—*Certain Diseases of Early Infancy*					
A 130		Birth injuries:—					
(*a*)	760	Intracranial and spinal injury at birth ..	..	9	5	9	..
(*b*)	761	Other birth injury	..	3	..	3	..
		Carried forward ..	4,453	79,745	2,832	84,198	4,210

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,453	79,745	2,832	84,198	4,210
		XV.—*Certain Diseases of Early Infancy —contd.*					
A 131	762	Post-natal asphyxia and atelectasis ..	..	11	7	11	..
A 132		Infections of the newborn:—					
(*a*)	763	Pneumonia of newborn	1	86	42	87	..
(*b*)	764	Diarrhœa of newborn	6	204	31	210	1
(*c*)	765	Ophthalmia neonatorum ..	..	2	..	2	..
(*d*)	766	Pemphigus neonatorum	..	11	1	11	2
(*e*)	767	Umbilical sepsis	..	14	3	14	..
(*f*)	768	Other sepsis of newborn ..	..	1	..	1	..
A 133	770	Hæmolytic disease of newborn ..	..	50	33	50	..
A 134	769, 771, 772	All other defined diseases of early infancy	..	26	8	26	..
A 135		Ill-defined diseases peculiar to early infancy, and immaturity unqualified:—					
(*a*)	773	Ill-defined diseases peculiar to early infancy	..	12	3	12	..
(*b*)	774–776	Immaturity and immaturity unqualified	1	49	14	50	4
		Carried forward ..	4,461	80,211	2,974	84,672	4,217

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,461	80,211	2,974	84,672	4,217
		XVI.—*Symptoms, Senility and Ill-Defined Conditions*					
A 136	794	Senility without mention of psychoses..	..	14	..	14	4
A 137		Ill-defined and unknown causes of morbidity and mortality:—					
(*a*)	780–789 except 788.8	Symptoms referable to systems or organs	42	1,090	31	1,132	36
(*b*)	788.8	Pyrexia of unknown origin ..	11	490	5	501	10
(*c*)	793	Observation, without need for further medical care	6	650	..	656	14
(*d*)	795.1	Malingering	..	15	..	15	..
(*e*)	795.2	Sudden death (cause unknown) ..	..	..	..	..	..
(*f*)	795.3	Found dead (cause unknown) ..	..	..	..	..	..
(*g*)	790–792 795.0, 795.4 795.5	Other ill-defined and unknown causes of morbidity and mortality ..	..	93	2	93	..
		Carried forward ..	4,520	82,563	3,012	87,083	4,281

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,520	82,563	3,012	87,083	4,281
		XVII.—*Accidents, Poisonings and Violence*					
		'E' Code: Alternative Classification of Accidents, Poisonings and Violence (External Causes)					
AE 138	E810–E835	Motor vehicle accidents	26	1,239	140	1,265	24
AE 139		Other Transport Accidents:—					
(*a*)	E800–E802	Railway accidents	..	1	..	1	1
(*b*)	E850–E858	Water transport accidents ..	..	2	..	2	..
(*c*)	E860–E866	Aircraft accidents	..	..	..	..	..
(*d*)	E840–E845	Other road vehicle accidents ..	..	61	2	61	..
AE 140		Accidental poisoning:—					
(*a*)	E870	Accidental poisoning by morphia and other opium derivatives ..	..	5	..	5	..
(*b*)	E874	Accidental poisoning by other analgesic and soporific drugs	..	38	..	38	..
(*c*)	E878	Accidental poisoning by other and unspecified drugs	..	24	..	24	..
(*d*)	E883	Accidental poisoning by corrosive aromatics, acids and caustic alkalies	1	89	11	90	..
		Carried forward ..	4,547	84,022	3,165	88,569	4,306

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,547	84,022	3,165	88,569	4,306
		XVII.—*Accidents, Poisonings and Violence —contd.*					
		'E' Code: Alternative Classification of Accidents, Poisonings and Violence (External Causes)—contd.					
AE 140 (*e*)	E884	Accidental poisoning by mercury and its compounds	..	4	..	4	..
(*f*)	E885	Accidental poisoning by lead and its compounds	..	5	1	5	..
(*g*)	E886	Accidental poisoning by arsenic and antimony and their compounds ..	..	..	..	..	..
(*h*)	E888	Accidental poisoning by other and unspecified solid or liquid substances ..	1	154	2	155	..
(*i*)	E890–E895	Accidental poisoning by gases and vapours	..	4	..	4	..
(*j*)	E871–E873, E875–E877, E879–E882, E887	Other accidental poisoning ..	..	5	..	5	..
AE 141	E900–E904	Accidental falls	32	852	18	884	43
AE 142	E912	Accident caused by machinery ..	..	15	1	15	..
AE 143	E916	Accident caused by fire and explosion of combustible material ..	9	181	10	190	7
AE 144	E917–E918	Accident caused by hot substance, corrosive liquid, steam and radiation ..	11	295	2	306	8
		Carried forward ..	4,600	85,537	3,199	90,137	4,364

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,600	85,537	3,199	90,137	4,364
		XVII.—*Accidents, Poisonings and Violence —contd.*					
		'E' Code: Alternative Classification of Accidents, Poisonings and Violence (External Causes)—contd.					
AE 145	E919	Accident caused by firearms ..	..	..	..	..	..
AE 146	E929	Accidental drowning and submersion ..	..	24	..	24	..
AE 147		All other accidental causes:—					
(*a*)	E920	Foreign body entering eye and adnexa	..	9	..	9	..
(*b*)	E923	Foreign body entering other orifice ..	2	81	1	83	1
(*c*)	E927	Accidents caused by bites and stings of venomous animals and insects ..	1	17	..	18	..
(*d*)	E928	Other accidents caused by animals ..	..	8	..	8	..
(*e*)	E913	Accidents caused by cutting or piercing instruments	..	79	2	79	2
(*f*)	E914	Accidents caused by electric current ..	..	6	..	6	..
(*g*)	E924, E925	Accidental mechanical suffocation ..	..	..	..	..	..
(*h*)	E926	Lack of care of infants under one year of age	..	..	..	..	..
(*i*)	E931	Excessive heat	..	1	..	1	..
(*j*)	E932	Excessive cold	..	..	..	..	..
		Carried forward ..	4,603	85,762	3,202	90,365	4,367

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,603	85,762	3,202	90,365	4,367
		XVII.—*Accidents, Poisonings and Violence —contd.*					
		'E' Code: Alternative Classification of Accidents, Poisonings and Violence (External Causes)—contd.					
AE 147 (*k*)	E933	Hunger, thirst and exposure ..	..	..	..	..	..
(*l*)	E934	Cataclysm	..	..	..	..	..
(*m*)	E935	Lightning	..	2	..	2	..
(*n*)	E936	Other and unspecified accidents ..	..	11	..	11	..
(*o*)	E940, E941	Vaccinia including post-vaccinal encephalitis	..	5	..	5	1
(*p*)	E942	Other complications of small-pox vaccination	..	..	..	..	..
(*q*)	E954	Anæsthetic accidents	..	..	..	..	..
(*r*)	E943–E946, E950–E953, E955–E959	Accidents due to medical or surgical intervention	..	15	..	15	..
(*s*)	E910, E911, E915, E921–E922, E930, E960–E962	All other accidental causes ..	13	541	12	554	18
		Carried forward ..	4,616	86,336	3,214	90,952	4,386

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,616	86,336	3,214	90,952	4,386
		XVII.—*Accidents, Poisonings and Violence —contd.*					
		'E' Code: Alternative Classification of Accidents, Poisonings and Violence (External Causes)—contd.					
AE 148		Suicide and self-inflicted injury:—					
(*a*)	E970	Suicide and self-inflicted injury by analgesic and soporific substances ..	..	8	2	8	..
(*b*)	E971	Suicide and self-inflicted injury by other solid and liquid substances ..	..	40	2	40	..
(*c*)	E972	Suicide and self-inflicted injury by gases in domestic use	..	1	..	1	..
(*d*)	E973	Suicide and self-inflicted injury by other gases	..	2	1	2	..
(*e*)	E974	Suicide and self-inflicted injury by hanging or strangulation ..	..	6	1	6	..
(*f*)	E975	Suicide and self-inflicted injury by submersion (drowning) ..	..	2	..	2	..
(*g*)	E976	Suicide and self-inflicted injury by firearms and explosives ..	..	1	..	1	1
(*h*)	E977	Suicide and self-inflicted injury by cutting or piercing instruments ..	2	18	3	20	3
		Carried forward ..	4,618	86,414	3,223	91,032	4,390

APPENDIX IV—*continued*

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1958—*continued*

Intermediate List Number	Detailed List Numbers	Cause Groups (Diseases)	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
				Admissions	Deaths		
		Brought forward ..	4,618	86,414	3,223	91,032	4,390
		XVII.—*Accidents, Poisonings and Violence —contd.*					
		'E' Code: Alternative Classification of Accidents, Poisonings and Violence (External Causes)—contd.					
AE 48 (*i*)	E978	Suicide and self-inflicted injury by jumping from high places ..	..	1	1	1	..
(*j*)	E963, E979	Suicide and self-inflicted injury by other and unspecified means ..	..	5	2	5	..
AE 149		Homicide and injury purposely inflicted by other persons (not in war):—					
(*a*)	E980	Non-accidental poisoning by another person	..	..	..	..	..
(*b*)	E981	Assault by firearms and explosives ..	1	15	..	16	2
(*c*)	E982	Assault by cutting and piercing instruments	2	199	2	201	3
(*d*)	E964, E983	Assault by other means	5	336	8	341	6
(*e*)	E984	Injury by intervention of police ..	..	..	..	..	..
(*f*)	E985	Execution (legal)	..	..	..	..	..
AE 150	E990–E999 E965	Injury resulting from operations of war	..	..	..	..	..
		Grand Total (Excluding Transfers and Healthy persons) ..	4,626	86,970	3,236	91,596	4,401

APPENDIX IV—*continued*

IN-PATIENTS BY RACIAL GROUPS 1958

Racial Group	*Remaining at end of 1957	YEARLY TOTAL		†Total cases treated	‡Remaining at end of 1958
		Admissions	Deaths		
Europeans	42	1,186	25	1,228	23
Eurasians	42	991	33	1,033	38
Chinese	3,764	66,391	2,631	70,155	3,623
Indians and Pakistanis	416	11.901	323	12,317	404
Malays	336	4,870	177	5,206	282
Javanese	26	1,631	47	1,657	31
Others					
Total ..	4,626	86,970	3,236	91,596	4,401
Healthy persons admitted to hospital to accompany children or friends ..		1		1	
Transfers to other Hospitals from General Hospital		354		354	

APPENDIX V

SINGAPORE (excluding Christmas and Cocos-keeling Islands)

DEATHS BY CAUSE, 1953–58

According to the Intermediate List, adapted for use in Singapore, of the Sixth Revision (1948) of the International List of Diseases and causes of Death

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		I.—INFECTIOUS AND PARASITIC DISEASES						
A 1	001–008	Tuberculosis of respiratory system	568	671	673	827	829	811
A 2	010	Tuberculosis of meninges and central nervous system	22	44	67	106	91	129
A 3	011	Tuberculosis of intestines, peritoneum and mesenteric glands ..	9	6	5	9	8	6
A 4		Tuberculosis of bones and joints:—						
(a)	012.0, 013.0	Tuberculosis of the vertebral column	3	2	4	7	6	6
(b)	012, 013 except 012.0, 013.0	Tuberculosis of other bones and joints	—	1	1	1	1	—
A 5		Tuberculosis, all other forms:—						
(a)	014	Tuberculosis of skin and sub-cutaneous cellular tissue ..	—	—	—	1	—	1
(b)	015	Tuberculosis of lymphatic system	2	—	1	—	—	1
(c)	016	Tuberculosis of genito-urinary system	5	3	2	1	1	1
(d)	017	Tuberculosis of adrenal glands	—	—	—	—	—	—
(e)	018	Tuberculosis of other organs	3	1	2	1	—	1
(f)	019	Disseminated tuberculosis	12	23	29	36	28	50
A 6	020	Congenital syphilis	5	11	12	6	15	27
A 7		Early Syphilis:—						
(a)	021.0, 021.1	Primary syphilis	1	—	—	—	—	—
(b)	021.2	Secondary syphilis	—	—	—	—	—	—
(c)	021.3	Early syphilis, relapse following treatment	—	—	—	—	—	—
(d)	021.4	Early syphilis (unspecified stage)	—	—	—	—	—	—
		Carried forward ..	630	762	796	995	979	1,033

—means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	630	762	796	995	979	1,033
		I.—INFECTIOUS AND PARASITIC DISEASES—*contd.*						
A 8	024	Tabes dorsalis	1	2	3	3	4	9
A 9	025	General paralysis of insane	14	7	7	46	45	28
A 10		All other syphilis:—						
(*a*)	022	Anuerysm of aorta	18	21	23	14	27	20
(*b*)	023	Other cardiovascular syphilis	11	9	11	16	28	13
(*c*)	026	Other syphilis of central nervous system	2	4	1	1	4	4
(*d*)	027	Other forms of late syphilis	3	—	—	1	1	1
(*e*)	028	Latent Syphilis	—	—	—	1	—	—
(*f*)	029	Syphilis, unqualified	—	1	4	2	1	1
A 11		Gonococcal infections:—						
(*a*)	030	Acute or unspecified gonorrhœa	—	—	—	—	—	—
(*b*)	031	Chronic gonococcal infection of genito-urinary system ..	—	—	—	—	—	—
(*c*)	032	Gonococcal infection of joint	—	—	—	—	—	—
(*d*)	033	Gonococcal infection of eye	—	—	—	—	—	—
(*e*)	034–035	Gonococcal infection of other sites	—	—	—	1	—	—
A 12	040	Typhoid fever	9	8	8	15	15	12
A 13		Paratyphoid fever and other Salmonella infections:—						
(*a*)	041	Paratyphoid fever A, B. or C	—	1	—	—	—	—
(*b*)	042	Other Salmonella infections	1	—	—	—	—	—
A 14	043	Cholera	—	—	—	—	—	—
A 15	044	Brucellosis (undulant fever)	—	—	—	—	—	—
A 16		Dysentery, all forms:—						
(*a*)	045	Bacillary dysentery	7	7	4	3	17	7
(*b*)	046	Amœbiasis	13	12	14	11	15	19
(*c*)	047–048	Other protozoal and unspecified forms of dysentery	12	12	5	13	15	18
		Carried forward ..	721	846	876	1,122	1,151	1,165

— means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	721	846	876	1,122	1,151	1,165
		I.—INFECTIOUS AND PARASITIC DISEASES—*contd.*						
A 17	050	Scarlet fever	—	—	1	—	—	1
A 18	051	Streptococcal sore throat	—	—	—	—	—	—
A 19	052	Erysipelas	—	1	—	—	—	—
A 20	053	Septicæmia and pyæmia	24	22	17	15	11	32
A 21	055	Diphtheria	40	66	66	49	39	59
A 22	056	Whooping Cough	3	5	15	1	1	2
A 23	057	Meningococcal infections	3	3	2	2	2	1
A 24		Plague:—						
(*a*)	058.0	Bubonic Plague	—	—	—	—	—	—
(*b*)	058.1	Pneumonic Plague	—	—	—	—	—	—
(*c*)	058.2	Other Plague	—	—	—	—	—	—
A 25	060	Leprosy	4	4	1	5	6	3
A 26	061	Tetanus:—						
(*a*)		Tetanus of the new-born	8	3	11	10	16	17
(*b*)		Tetanus, other forms	33	18	21	20	2	6
A 27	062	Anthrax	—	—	—	—	—	—
A 28	080	Acute Poliomyelitis	14	8	2	6	4	4
A 29	082	Acute infectious encephalitis	5	9	5	1	15	2
A 30	081, 083	Late effects of acute poliomyelitis and acute infectious encephalitis ..	—	1	1	1	—	1
A 31	084	Small-pox	1	—	—	—	—	—
		Carried forward ..	856	986	1,018	1,232	1,247	1,293

— means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	856	986	1,018	1,232	1,247	1,293
		I.—INFECTIOUS AND PARASITIC DISEASES—*contd.*						
A 32	085	Measles	30	5	19	23	17	13
A 33	091	Yellow fever	—	—	—	—	—	—
A 34	092	Infectious hepatitis	27	13	12	12	11	9
A 35	094	Rabies	—	—	—	—	—	—
A 36		Typhus and other rickettsial diseases:—						
(*a*)	100	Louse-borne epidemic typhus	—	—	—	—	—	—
(*b*)	101	Flea-borne epidemic typhus (murine)	—	—	—	—	—	—
(*c*)	104	Tick-borne epidemic typhus	—	—	—	—	—	—
(*d*)	105	Mite-borne typhus	—	—	—	—	1	—
(*e*)	102–103, 106–108	Other and unspecified typhus	—	—	—	—	—	—
A 37		Malaria:—						
(*a*)	110	Vivax malaira (benign tertian)	—	—	—	—	1	1
(*b*)	111	Malariae malaria (quartan)	—	—	—	—	—	—
(*c*)	112	Falciparum malaria (malignant tertian)	—	—	2	1	5	3
(*d*)	114	Mixed malarial infections	—	—	—	—	—	—
(*e*)	115	Blackwater fever	1	—	—	—	—	—
(*f*)	113, 116-117	Other and unspecified forms of malaria	5	12	8	21	17	38
A 38		Schistosomiasis:—						
(*a*)	123.0	Schistosomiasis vesical (S. hæmatobium)	—	—	—	—	—	—
(*b*)	123.1	Schistosomiasis intestinal (S. Mansoni)	—	—	—	—	—	—
(*c*)	123.2	Schistosomiasis Pulmonary (S. japonicum)	—	—	—	—	—	—
(*d*)	123.3	Other and unspecified Schistosomiasis	—	—	—	—	—	—
A 39	125	Hydatid disease	—	—	—	—	—	—
A 40	127	Filariasis	—	—	—	—	—	—
A 41	129	Ankylostomiasis	1	2	3	2	1	2
		Carried forward ..	920	1,018	1,062	1,291	1,300	1,359

— means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	920	1,018	1,062	1,291	1,300	1,359
		I.—INFECTIOUS AND PARASITIC DISEASES—*contd.*						
A 42		Other diseases due to helminths:—						
(*a*)	124	Other trematode infestation	2	—	—	—	—	—
(*b*)	126	Tape worm (infestation) and other cestode infestation ..	—	—	—	—	—	2
(*c*)	128	Trichiniasis	—	—	—	—	—	—
(*d*)	130.0	Ascariasis	12	8	7	11	15	30
(*e*)	130.1–130.3	Other diseases due to helminths	1	3	3	—	1	3
A 43		All other diseases classified as infective and parasitic:—						
(*a*)	036	Chancroid	—	—	—	—	—	—
(*b*)	037	Lymphogranuloma venereum	—	—	—	—	—	—
(*c*)	038	Granuloma inguinale, venereal	—	—	—	—	—	—
(*d*)	039	Other and unspecified venereal diseases	—	—	—	—	—	—
(*e*)	049	Food poisoning (infection and intoxication)	—	—	—	—	—	—
(*f*)	059	Tularemia	—	—	—	—	—	—
(*g*)	063	Gas Gangrene	1	—	—	—	—	—
(*h*)	064.2	Glanders	—	—	—	—	—	—
(*i*)	064.3	Melioidosis	—	—	—	—	—	—
(*j*)	064.0, 064.1, 064.4	Other bacterial diseases	—	—	—	—	—	—
(*k*)	070	Vincent's infection	—	—	—	—	—	—
(*l*)	071	Relapsing fever	—	—	—	—	—	—
(*m*)	072	Leptospirosis icterohæmorrhagica (Weil's disease)	—	1	—	—	—	2
(*n*)	073	Yaws	—	—	—	—	—	—
(*o*)	086	Rubella (German measles)	1	—	—	—	—	—
(*p*)	087	Chicken-pox	1	1	—	—	—	—
(*q*)	088	Herpes Zoster	—	—	—	—	—	—
(*r*)	089	Mumps	—	—	—	—	—	1
(*s*)	090	Dengue	—	—	—	—	—	—
(*t*)	093	Glandular fever	—	—	—	—	—	—
(*u*)	095	Trachoma	—	—	—	—	—	—
(*v*)	120	Leishmaniasis	—	—	—	—	—	—
		Carried forward ..	938	1,031	1,072	1,302	1,316	1,397

— means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	938	1,031	1,072	1,302	1,316	1,397
		I.—INFECTIOUS AND PARASITIC DISEASES—*contd.*						
A 43								
(*w*)	121	Trypanosomiasis	—	—	—	—	—	—
(*x*)	131	Dermatophytosis	—	—	—	—	—	—
(*y*)	132	Actinomycosis	—	—	—	—	—	—
(*z*)	133,134	Other fungus infections	—	—	—	10	3	6
(A)	135	Scabies	—	—	—	—	—	—
(B)	054,074 096.122 136–138	All other diseases classified as infective and parasitic ..	5	3	2	3	4	—
		SUB-TOTAL I ..	943	1,034	1,074	1,315	1,323	1,403
		II.—NEOPLASMS						
A 44	140–148	Malignant neoplasm of buccal cavity and pharynx	67	52	51	50	33	38
A 45	150	Malignant neoplasm of œsophagus	80	67	52	50	50	37
A 46	151	Malignant neoplasm of stomach	148	168	144	143	109	124
A 47		Malignant neoplasm of intestine except rectum:—						
(*a*)	152	Malignant neoplasm of small intestine, including duodenum ..	—	—	1	1	—	—
(*b*)	153	Malignant neoplasm of large intestine, except rectum ..	28	26	24	18	16	22
A 48	154	Malignant neoplasm of rectum	26	22	26	14	21	11
A 49	161	Malignant neoplasm of larynx	13	16	11	9	14	9
A 50	162–163	Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	95	90	72	72	59	55
A 51	170	Malignant neoplasm of breast	24	27	33	32	25	23
		Sub-Total II *Carried forward* ..	481	468	414	389	327	319
		Carried forward ..	1,424	1,502	1,488	1,704	1,650	1,722

— means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	1,424	1,502	1,488	1,704	1,650	1,722
		Sub-Total II *Brought forward* ..	481	468	414	389	327	319
		II.—NEOPLASMS—*contd.*						
A 52	171	Malignant neoplasm of cervix uteri	38	38	25	33	34	29
A 53	172–174	Malignant neoplasm of other and unspecified parts of uterus ..	27	19	25	24	27	28
A 54	177	Malignant neoplasm of prostate	7	4	6	2	2	3
A 55	190–191	Malignant neoplasm of skin	11	15	15	12	20	8
A 56	196–197	Malignant neoplasm of bone and connective tissue	8	6	5	6	9	4
A 57		Malignant neoplasm of all other and unspecified sites:—						
(*a*)	155–156	Malignant neoplasm of liver	96	100	84	74	77	75
(*b*)	157	Malignant neoplasm of pancreas	10	5	14	4	4	6
(*c*)	158	Malignant neoplasm of peritoneum	4	5	4	1	4	6
(*d*)	159	Malignant neoplasm of unspecified digestive organs	—	1	—	—	—	—
(*e*)	175–176	Malignant neoplasm of other and unspecified female genital organs	15	15	3	13	7	10
(*f*)	178–179	Malignant neoplasm of other and unspecified male genital organs	1	3	1	2	3	1
(*g*)	180–181	Malignant neoplasm of kidney, bladder and other urinary organs	9	9	10	8	17	11
(*h*)	160 164–165 192–195 198–199	Malignant neoplasm of all other and unspecified sites ..	55	40	48	52	41	
A 58	204	Leukæmia and Aleukæmia	47	36	31	27	23	23
A 59		Lymphosarcoma and other neoplasms of lymphatic and hæmatopoietic system:—						
(*a*)	200	Lymphosarcoma and reticulosarcoma	6	1	5	3	4	7
(*b*)	201	Hodgkin's disease	9	1	6	3	4	4
		Sub-Total II *Carried forward* ..	824	766	696	653	603	575
		Carried forward ..	1,767	1,800	1,770	1,968	1,926	1,978

— means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	1,767	1,800	1,770	1,968	1,926	1,978
		Sub-Total II *Brought forward* ..	824	766	696	653	603	575
		II.—NEOPLASMS—*contd.*						
A 59 (*c*)	202–203 205	Other neoplasm of lymphatic and hæmatopoietic system ..	1	3	1	2	2	1
A 60		Benign neoplasms and neoplasms of unspecified nature:—						
(*a*)	210–211	Benign neoplasm of buccal cavity, pharynx and digestive system ..	—	1	—	2	1	4
(*b*)	213–217	Benign neoplasm of female genital organs	2	1	—	2	1	—
(*c*)	218	Benign neoplasm of male genital organs	—	—	—	—	—	—
(*d*)	212 219–229	Benign neoplasm of other and unspecified organs and tissue ..	6	10	8	19	13	27
(*e*)	230	Neoplasm of unspecified nature of digestive organs	2	—	2	—	1	—
(*f*)	233–235	Neoplasm of unspecified nature of other female genital organs ..	—	1	—	—	1	—
(*g*)	231–232 236–239	Neoplasm of unspecified nature of other unspecified organs ..	23	26	21	4	5	14
		SUB-TOTAL II ..	858	808	728	682	627	621
		III.—ALLERGIC ENDOCRINE SYSTEM, METABOLIC AND NUTRITIONAL DISEASES						
		IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS						
A 61	250–251	Nontoxic goitre	—	—	1	—	—	—
A 62	252	Thyrotoxicosis with or without goitre	7	5	6	7	5	6
A 63	260	Diabetes mellitus	80	62	69	73	54	65
		Aggregate of Sub-Totals III and IV *Carried forward* ..	87	67	76	80	59	71
		Carried forward ..	1,888	1,909	1,878	2,077	2,009	2,095

— means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	1,888	1,909	1,878	2,077	2,009	2,095
		Aggregate of Sub-Totals III and IV *Brought forward* ..	87	67	76	80	59	71
		III.—ALLERGIC ENDOCRINE SYSTEM, METABOLIC AND NUTRITIONAL DISEASES—*contd.*						
		IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS—*contd.*						
A 64		Avitaminoses and other deficiency states:—						
(*a*)	280	Beri-beri	63	132	99	93	100	129
(*b*)	281	Pellagra	—	—	—	—	—	—
(*c*)	282	Scurvy	—	—	1	—	1	1
(*d*)	283–284	Rickets	—	1	1	1	2	1
(*e*)	285	Osteomalcia	—	—	—	—	—	—
(*f*)	286.0	Steatorrhœa and sprue	—	—	—	—	—	—
(*g*)	286.5	Malnutrition, unqualified	68	52	48	32	31	31
(*h*)	286.1–286.4 286.6	Other avitaminoses and nutritional deficiency states	8	9	9	16	34	41
A 65		Anæmias:—						
(*a*)	290	Pernicious and other hyperchromic anæmias	1	1	—	2	1	5
(*b*)	291	Iron deficiency anæmias (hypochromic)	—	—	—	—	—	—
(*c*)	292–293	Other specified and unspecified anæmias	75	55	58	48	24	26
A 66		Allergic disorders; all other endocrine, metabolic and blood diseases:—						
(*a*)	241	Asthma	146	164	141	155	156	164
(*b*)	240 242–245	Angioneurotic œdema, urticaria and other allergic disorders ..	—	2	2	—	—	—
(*c*)	253	Myxœdema and cretinism	1	—	1	1	—	—
(*d*)	254	Other diseases of thyroid gland	—	—	—	—	—	—
(*e*)	270	Disorders of pancreatic internal secretion other than diabetes mellitus	—	—	—	—	—	—
(*f*)	271	Diseases of parathyroid gland	—	—	—	—	—	—
(*g*)	272	Diseases of pituitary gland	1	—	—	—	—	—
		Aggregate of Sub-Totals III and IV *Carried forward* ..	450	483	436	428	408	469
		Carried forward ..	2,251	2,325	2,238	2,425	2,358	2,493

— means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

	Inter-mediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
			Brought forward ..	2,251	2,325	2,238	2,425	2,358	2,493
			Aggregate of Sub-Totals III and IV *Brought forward* ..	450	483	436	428	408	469
			III.—ALLERGIC ENDOCRINE SYSTEM, METABOLIC AND NUTRITIONAL DISEASES—*contd.*						
			IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS—*contd.*						
A	66 (*h*)	273	Diseases of thymus gland	—	—	—	—	1	—
	(*i*)	274	Disease of adrenal gland	1	2	1	—	—	1
	(*j*)	275–277	Other diseases of endocrine glands	—	—	—	—	—	—
	(*k*)	288	Gout	—	1	—	—	—	—
	(*l*)	287, 289	Other metabolic diseases	2	—	1	3	—	2
	(*m*)	294	Polycythemia	—	—	—	—	—	—
	(*n*)	295	Hæmophilia	—	—	—	—	—	—
	(*o*)	296	Purpura and other hæmorrhagic conditions	4	4	3	6	8	8
	(*p*)	297	Agranulocytosis	1	—	—	—	—	—
	(*q*)	298	Diseases of spleen	1	2	—	1	—	1
	(*r*)	299	Other diseases of blood and blood-forming organs	—	—	—	—	—	1
			AGGREGATE OF SUB-TOTALS III AND IV ..	459	492	441	438	417	482
			V.—MENTAL, PSYCHONEUROTIC AND PERSONALITY DISORDERS						
A	67		Psychoses:—						
	(*a*)	300	Schizophrenic disorders (dementia præcox	1	—	1	2	6	5
	(*b*)	301	Maniac-depressive reaction	—	3	2	1	7	1
	(*c*)	302	Involutional melancholia	—	—	—	—	—	—
	(*d*)	303	Paranoia and paranoid states	—	—	—	—	—	—
	(*e*)	304	Senile psychoses	2	2	1	5	5	1
	(*f*)	305–309	Other and unspecified psychoses	1	—	1	—	3	7
			Sub-Total V *Carried forward* ..	4	5	5	13	21	14
			Carried forward ..	2,264	2,339	2,248	2,448	2,388	2,520

— means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	2,264	2,339	2,248	2,448	2,388	2,520
		Sub-Total V *Brought forward* ..	4	5	5	13	21	14
		V.—MENTAL, PSYCHONEUROTIC AND PERSONALITY DISORDERS—*contd.*						
A 68		Psychoneurosis and disorders of personality:—						
(*a*)	311	Hysterical reaction	—	—	1	—	—	—
(*b*)	314	Neurotic-depressive reaction	—	—	—	—	—	—
(*c*)	322	Alcoholism	—	—	—	—	1	—
(*d*)	323	Other drug addiction	—	1	—	—	—	—
(*e*)	310, 312–313 315–321, 324 326	Other psychoneurosis and disorders of personality	—	5	—	—	—	—
A 69	325	Mental deficiency	—	2	1	—	—	—
		SUB-TOTAL V ..	4	13	7	13	22	14
		VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS						
A 70		Vascular lesions affecting central nervous system:—						
(*a*)	331	Cerebral hæmorrhage	340	334	335	301	257	185
(*b*)	332	Cerebral embolism and thrombosis	103	114	88	72	67	28
(*c*)	330 333–334	Other vascular lesions affecting central nervous system ..	18	11	18	5	14	19
A 71	340	Non-meningococcal meningitis	64	65	72	60	53	43
		Sub-Total VI *Carried forward* ..	525	524	513	438	391	275
		Carried forward ..	2,789	2,871	2,763	2,886	2,780	2,795

— means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	2,789	2,871	2,763	2,886	2,780	2,795
		Sub-Total VI *Brought forward* ..	525	524	513	438	391	275
		VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS—*contd.*						
A 72	345	Multiple sclerosis	—	—	—	—	—	—
A 73	353	Epilepsy	12	3	9	3	16	4
A 74		Inflammatory diseases of eye:—						
(*a*)	370	Conjunctivitis and ophthalmia	—	—	—	—	—	—
(*b*)	371–379	Other inflammatory diseases of eye	—	1	—	—	—	—
A 75	385	Cataract	—	—	—	—	—	—
A 76	387	Glaucoma	—	—	—	—	—	—
A 77		Otitis media and mastoiditis:—						
(*a*)	390	Otitis externa	—	—	—	—	—	—
(*b*)	391–393	Otitis media and mastoiditis	8	7	8	22	16	25
(*c*)	394	Other inflammatory diseases of ear	—	—	—	—	—	—
A 78		All other diseases of the nervous system and sense organs:—						
(*a*)	380–384, 386, 388, 389	All other diseases and conditions of eye	1	—	—	—	—	—
(*b*)	342	Intracranial and intraspinal abscess	7	8	6	6	6	5
(*c*)	343	Encephalitis, myelitis and encephalomyelitis	82	49	42	54	43	47
(*d*)	350	Paralysis agitans	5	5	4	1	2	3
(*e*)	352	Other cerebral paralysis	74	71	94	101	104	77
(*f*)	356	Motor neurone disease and muscular atrophy	—	1	1	—	—	—
(*g*)	357	Other diseases of spinal cord	—	1	—	1	—	—
(*h*)	366	Other and unspecified forms of neuralgia and neuritis ..	7	2	—	1	1	4
(*i*)	367	Other diseases of cranial nerves	—	—	—	—	—	1
(*j*)	369	Diseases of peripheral autonomic nervous system	—	—	—	—	—	—
		Sub-Total VI *Carried forward* ..	721	672	677	627	579	441
		Carried forward ..	2,985	3,019	2,927	3,075	2,968	2,961

— means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	2,985	3,019	2,927	3,075	2,968	2,961
		Sub-Total VI *Brought forward* ..	721	672	677	627	579	441
		VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS—*contd.*						
A 78 (*k*)	341, 344 351, 354 355 360–365 368 395–398	All other diseases of the nervous system and sense organs ..	13	10	11	6	7	16
		SUB-TOTAL VI ..	**734**	**682**	**688**	**633**	**586**	**457**
		VII.—DISEASES OF THE CIRCULATORY SYSTEM						
A 79		Rheumatic fever:—						
(*a*)	400	Rheumatic fever without mention of heart involvement ..	4	2	1	1	2	1
(*b*)	401	Rheumatic fever with heart involvement	5	5	3	1	6	16
(*c*)	402	Chorea	—	—	—	—	—	2
A 80		Chronic rheumatic heart disease:—						
(*a*)	410–413	Diseases of valves specified as rheumatic	61	63	68	53	68	55
(*b*)	414	Other endocarditis specified as rheumatic	6	25	32	32	7	21
(*c*)	415	Other myocarditis specified as rheumatic	—	1	1	1	1	—
(*d*)	416	Other heart disease specified as rheumatic	16	14	25	40	26	6
A 81		Arteriosclerotic and degenerative heart disease:—						
(*a*)	420	Arteriosclerotic heart disease, including coronary disease ..	267	226	215	189	159	140
(*b*)	421	Chronic endocarditis not specified as rheumatic	25	21	39	44	53	52
(*c*)	422	Other myocardial degeneration	67	68	89	64	52	43
		Sub-Total VII *Carried forward* ..	451	425	473	425	374	336
		Carried forward ..	3,449	3,454	3,411	3,506	3,349	3,313

—means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	3,449	3,454	3,411	3,506	3,349	3,313
		Sub-Total VII *Brought forward* ..	451	425	473	425	374	336
		VII.—DISEASES OF THE CIRCULATORY SYSTEM—*continued*						
A 82		Other diseases of heart:—						
(*a*)	430	Acute and subacute endocarditis	30	32	24	16	10	9
(*b*)	431	Acute myocarditis not specified as rheumatic	1	1	1	4	4	8
(*c*)	432	Pericarditis not specified as rheumatic	1	4	1	—	—	2
(*d*)	433	Functional disease of heart	12	8	6	7	10	13
(*e*)	434	Other and unspecified diseases of heart	191	319	179	229	196	179
A 83	440–443	Hypertension with heart disease	38	48	54	50	86	113
A 84	444–447	Hypertension without mention of heart	143	106	134	130	75	63
A 85		Disease of arteries:—						
(*a*)	450	General arteriosclerosis	20	16	15	21	8	24
(*b*)	451	Aortic aneurysm specified as non-syphilitic and dissecting aneurysm	2	—	1	1	2	4
(*c*)	452	Other aneurysm, except of heart and aorta	1	4	—	3	4	7
(*d*)	453	Peripheral vascular disease	—	—	—	1	—	—
(*e*)	454	Arterial embolism and thrombosis	1	—	—	—	—	—
(*f*)	455	Gangrene of unspecified cause	2	4	4	3	6	3
(*g*)	456	Other diseases of arteries	1	—	1	—	1	2
A 86		Other diseases of circulatory system:—						
(*a*)	460, 462	Varicose veins	3	7	1	5	3	—
(*b*)	461	Hæmorrhoids	—	—	—	—	1	—
(*c*)	463–464	Phiebitis and thrombophlebitis	—	1	—	1	1	—
(*d*)	465	Pulmonary embolism and infarction	3	6	4	2	3	5
(*e*)	466	Other venous embolism and thromboisis	—	1	1	—	—	—
(*f*)	467	Other diseases of circulatory system	1	4	3	—	1	12
(*g*)	468	Adenitis, Lymphadenitis, and other diseases of lymph nodes and lymph channels	—	—	—	—	1	1
		SUB-TOTAL VII ..	901	986	902	898	786	781
		Carried forward ..	3,899	4,015	3,840	3,979	3,761	3,758

—means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	3,899	4,015	3,840	3,979	3,761	3,758
		VIII.—DISEASES OF THE RESPIRATORY SYSTEM						
A 87		Acute upper respiratory infections:—						
(*a*)	470	Acute nasopharyngitis (common cold)	1	—	1	2	2	1
(*b*)	471	Acute sinusitis	—	—	—	1	—	—
(*c*)	472	Acute pharyngitis	7	3	3	9	9	7
(*d*)	473	Acute tonsillitis	4	2	1	9	2	3
(*e*)	474	Acute laryngitis and tracheitis	—	3	1	3	3	4
(*f*)	475	Acute upper respiratory infection of multiple or unspecified sites ..	—	—	—	—	10	—
A 88	480–483	Influenza	36	87	37	25	30	39
A 89	490	Lobar Pneumonia	91	147	163	176	119	169
A 90	491	Broncho-pneumonia	816	700	610	667	732	909
A 91	492–493	Primary atypical, other and unspecified pneumonia	159	187	248	187	215	259
A 92	500	Acute bronchitis	19	22	20	13	36	25
A 93		Bronchitis, chronic and unqualified:—						
(*a*)	501	Bronchitis unqualified	42	32	16	19	22	5
(*b*)	502	Chronic bronchitis	128	124	97	109	151	161
A 94	510	Hypertrophy of tonsils and adenoids	—	—	—	—	—	—
A 95		Empyema and Abscess of lung:—						
(*a*)	518	Empyema	19	8	9	14	8	18
(*b*)	521	Abscess of lung	22	21	14	7	11	10
		Sub-Total VIII *Carried forward* ..	1,344	1,336	1,220	1,241	1,350	1,610
		Carried forward ..	5,243	5,351	5,060	5,220	5,111	5,368

—means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	5,243	5,351	5,060	5,220	5,111	5,368
		Sub-Total VIII *Brought forward* ..	1,344	1,336	1,220	1,241	1,350	1,610
		VIII.—DISEASES OF THE RESPIRATORY SYSTEM—*continued*						
A 96	519	Pleurisy	1	3	4	6	4	3
A 97		All other respiratory diseases:—						
(*a*)	517	Other diseases of upper respiratory tract	4	1	3	6	7	1
(*b*)	520	Spontaneous pnuemothorax	5	—	2	3	1	1
(*c*)	522	Pulmonary congestion and hypostasis	28	27	15	14	5	8
(*d*)	525	Other chronic interstitial pneumonia	4	2	3	4	5	2
(*e*)	523	Pneumoconiosis	—	—	—	—	—	—
(*f*)	526	Bronchiectasis	50	39	21	27	22	25
(*g*)	511–516 524 527	All other respiratory diseases	27	20	18	10	15	32
		SUB-TOTAL VIII ..	1,463	1,428	1,286	1,311	1,409	1,682
		IX.—DISEASES OF THE DIGESTIVE SYSTEM						
A 98		Diseases of teeth and supporting structures:—						
(*a*)	530	Denta caries	—	—	—	—	—	—
(*b*)	531, 532	Abscesses and other inflammatory diseases of supporting structures of teeth	—	—	—	—	—	—
(*c*)	533–535	Other diseases of teeth and supporting structures	1	—	—	—	—	—
A 99	540	Ulcer of stomach	64	53	67	72	69	66
		Sub-Total IX *Carried forward* ..	65	53	67	72	69	66
		Carried forward ..	5,427	5,496	5,193	5,362	5,239	5,506

—means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	5,427	5,496	5,193	5,362	5,239	5,506
		Sub-Total IX *Brought forward* ..	65	53	67	72	69	66
		IX.—DISEASES OF THE DIGESTIVE SYSTEM—*continued*						
A 100	541	Ulcer of duodenum	8	10	6	29	16	10
A 101	543	Gastritis and duodenitis	16	12	7	38	31	10
A 102	550–553	Appendicitis	14	16	23	17	23	20
A 103		Intestinal obstruction and hernia:—						
(*a*)	560	Hernia of abdominal cavity without mention of obstruction ..	3	4	2	6	1	7
(*b*)	561	Hernia of abdominal cavity with obstruction ..	4	8	6	10	10	10
(*c*)	570.0	Intussusception	4	8	7	3	12	7
(*d*)	570.3	Volvulus	5	1	2	1	4	1
(*e*)	570.1, 570.2 570.4, 570.5	Other intestinal obstruction without mention of hernia ..	26	15	19	18	27	19
A 104		Gastro-enteritis and colitis, except diarrhœa of the newborn:—						
(*a*)	571.0	Gastro-enteritis and colitis, ages between 4 weeks and 2 years ..	552	439	456	531	662	743
(*b*)	571.1	Gastro-enteritis and colitis, ages 2 years and over	95	125	142	137	173	193
(*c*)	572	Chronic enteritis and ulcerative colitis	6	16	5	4	14	12
A 105		Cirrhosis of liver:—						
(*a*)	581.0	Cirrhosis of liver without mention of alcoholism	100	92	116	77	92	78
(*b*)	581.1	Cirrhosis of liver with alcoholism	1	—	1	—	—	—
A 106		Cholelithiasis and Cholecystitis:—						
(*a*)	584	Cholelithiasis	3	2	5	6	17	9
(*b*)	585	Cholecystitis without mention of calculi	10	14	16	15	5	7
		Sub-Total IX *Carried forward* ..	912	815	880	964	1,156	1,192
		Carried forward ..	6,274	6,258	6,006	6,254	6,326	6,632

—means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	6,274	6,258	6,006	6,254	6,326	6,632
		Sub-Total IX *Brought forward* ..	912	815	880	964	1,156	1,192
		IX.—DISEASES OF THE DIGESTIVE SYSTEM—*contd.*						
A 107		Other diseases of Digestive System:—						
(*a*)	536	Stomatitis	1	—	1	2	3	1
(*b*)	537, 538	Other diseases of buccal cavity	—	1	—	—	—	—
(*c*)	539.0	Functional disorders of œsophagus	—	—	—	—	—	1
(*d*)	539.1	Other diseases of œsophagus	5	1	2	1	5	3
(*e*)	544	Disorders of function of stomach	1	5	1	3	—	—
(*f*)	542, 545	Other diseases of stomach and duodenum	8	20	14	14	12	17
(*g*)	583.0	Constipation	—	—	—	—	—	—
(*h*)	573 except 573.0	Other functional disorders of intestines	—	—	—	1	—	—
(*i*)	574	Anal fissure and fistula	—	—	—	—	1	—
(*j*)	575	Abscess of anal and rectal regions	—	—	—	—	—	—
(*k*)	576	Peritonitis	37	25	26	24	15	18
(*l*)	577, 578	Other diseases of intestines and peritoneum	9	4	1	2	3	6
(*m*)	580	Acute yellow atrophy of liver	5	11	12	22	13	14
(*n*)	582, 583	Other diseases of liver	23	20	21	21	25	24
(*o*)	586	Other diseases of gall-bladder and biliary ducts	7	6	3	3	3	3
(*p*)	587	Diseases of pancreas	6	4	7	9	3	1
		SUB-TOTAL IX ..	**1,014**	**912**	**968**	**1,066**	**1,239**	**1,280**
		X.—DISEASES OF THE GENITO-URINARY SYSTEM						
A 108	590	Acute nephritis	11	9	10	16	23	19
		Sub-Total X *Carried forward* ..	11	9	10	16	23	19
		Carried forward ..	6,387	6,364	6,104	6,372	6,432	6,739

—means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	6,387	6,364	6,104	6,372	6,432	6,739
		Sub-Total X *Brought forward* ..	11	9	10	16	23	19
		X.—DISEASES OF THE GENITO-URINARY SYSTEM—*contd.*						
A 109		Chronic, other and unspecified nephritis:—						
(*a*)	591	Nephritis with œdema, including nephrosis	10	18	15	6	6	6
(*b*)	592	Chronic nephritis	111	117	117	125	168	176
(*c*)	593	Nephritis not specified as acute or chronic	76	87	96	98	68	53
(*d*)	594	Other renal sclerosis	—	—	—	—	—	—
A 110	600	Infections of kidney	60	52	36	47	19	15
A 111		Calculi of urinary system:—						
(*a*)	602	Calculi of kidney and ureter	5	5	4	6	2	2
(*b*)	604	Calculi of other parts of urinary system	—	1	—	—	—	1
A 112	610	Hyperplasia of prostate	9	2	3	5	6	3
A 113	620–621	Diseases of breast	—	—	—	—	—	—
A 114		Other diseases of genito-urinary system:—						
(*a*)	603	Other diseases of kidney and ureter	1	—	3	1	1	—
(*b*)	605	Cystitis	3	3	2	3	5	2
(*c*)	606	Other diseases of bladder	3	2	1	4	1	2
(*d*)	608	Stricture of urethra	—	1	—	1	3	2
(*e*)	607, 609	Other diseases of urethra	1	1	1	—	—	1
(*f*)	612	Other diseases of prostate	—	—	—	—	1	3
(*g*)	613	Hydrocele	—	—	—	—	—	—
(*h*)	614	Orchitis and epididymitis	—	1	—	—	—	—
(*i*)	611 615–617	Other diseases of male genital organs	2	—	2	2	2	—
(*j*)	622–624	Salpingitis and oophoritis	2	—	1	2	4	1
		Sub-Total X *Carried forward* ..	294	299	291	316	309	286
		Carried forward ..	6,670	6,654	6,385	6,672	6,718	7,006

—means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	6,670	6,654	6,385	6,672	6,718	7,006
		Sub-Total X *Brought forward* ..	294	299	291	316	309	286
		X.—DISEASES OF THE GENITO-URINARY SYSTEM—*contd.*						
A 114								
(*k*)	625	Other diseases of ovary and Fallopian tube	—	—	—	—	—	—
(*l*)	626	Diseases of parametrium and pelvic peritoneum (female) ..	1	—	—	1	2	—
(*m*)	630	Infective disease of uterus, vagina and vulva	3	1	1	5	1	1
(*n*)	631–633	Other diseases of uterus	—	1	—	—	2	1
(*o*)	634	Disorders of menstruation	1	—	1	—	—	—
(*p*)	635–637	Other diseases of female genital organs	—	—	—	—	—	—
(*q*)	601	All other diseases of the genito-urinary system	—	—	1	1	—	—
		SUB-TOTAL X ..	299	301	294	323	314	288
		XI.—DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH AND THE PUERPERIUM						
A 115		Sepsis of pregnancy, childbirth and the puerperium:—						
(*a*)	640	Pyelitis and pyelonephritis of pregnancy	—	—	—	—	—	—
(*b*)	641	Other infections of genito-urinary tract during pregnancy ..	1	—	—	—	1	—
(*c*)	681	Sepsis of childbirth and the puerperium	4	3	1	4	8	4
(*d*)	682	Pueperal phlebitis and thrombosis	—	—	—	—	—	—
	684	Puerperal pulmonary embolism	—	—	—	—	—	1
A 116		Toxæmias of pregnancy and the puerperium:—						
(*a*)	642.2	Pre-eclampsia of pregnancy	2	4	—	3	4	—
(*b*)	642.3	Eclampsia of pregnancy	5	—	5	4	8	7
		Sub-Total XI *Carried forward* ..	12	7	6	11	21	12
		Carried forward ..	6,687	6,663	6,394	6,690	6,744	7,020

—means **nil**.

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	6,687	6,663	6,394	6,690	6,744	7,020
		Sub-Total XI *Brought forward* ..	12	7	6	11	21	12
		XI.—DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH AND THE PUERPERIUM—*contd.*						
A 116								
(*c*)	642.4	Hyperemesis gravidarum	—	—	—	—	1	1
(*d*)	642.5	Acute yellow atrophy of liver of pregnancy	—	—	—	—	—	—
(*e*)	642.5	Other toxæmias of pregnancy	2	4	6	6	11	10
(*f*)	652	Abortion with toxæmia, without mention of sepsis	—	—	—	—	—	—
(*g*)	685	Puerperal eclampsia	1	1	1	—	—	1
(*h*)	642.0, 642.1 686	Other forms of puerperal toxæmia	—	—	—	—	—	2
A 117		Hæmorrhage of pregnancy and childbirth:—						
(*a*)	643	Placenta preavia	1	—	—	—	1	1
(*b*)	644	Other hæmorrhage of pregnancy	4	—	—	—	—	4
(*c*)	670	Delivery complicated by placenta prævia or antepartum hæmorrhage	3	3	1	5	4	—
(*d*)	671	Delivery complicated by retained placenta	1	7	3	3	6	3
(*e*)	672	Delivery complicated by other postpartum hæmorrhage ..	11	17	12	12	17	18
A 118	650	Abortion without mention of sepsis or toxæmia	3	—	—	4	—	1
A 119	651	Abortion with sepsis	1	2	1	1	—	2
A 120		Other complications of pregnancy, childbirth and the puerperium:—						
(*a*)	645	Ectopic pregnancy	—	4	2	2	2	5
(*b*)	646	Anæmia of pregnancy	—	—	—	1	1	—
(*c*)	660	Delivery without complications	1	2	2	1	2	1
(*d*)	683	Pyrexia of unknown origin during the puerperium	2	—	3	—	2	1
(*e*)	689	Mastitis and other disorders of lactation	—	—	—	—	—	—
(*f*)	647–649 673–680 687,688	Other complications of pregnancy, childbirth and the puerperium	8	8	8	6	20	6
		SUB-TOTAL XI ..	50	55	45	52	88	68
		Carried forward ..	6,725	6,711	6,433	6,731	6,811	7,076

—means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	6,725	6,711	6,433	6,731	6,811	7,076
		XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE						
		XIII.—DISEASES OF THE BONES AND ORGANS OF MOVEMENT						
A 121		Infections of skin and subcutaneous tissue:—						
(*a*)	690	Boil and carbuncle	2	1	1	3	3	3
(*b*)	691–693	Cellulitis and abscess	4	10	9	11	21	29
(*c*)	694–698	Other infections of skin and subcutaneous tissue	1	3	—	—	—	3
A 122		Arthritis and spondylitis:—						
(*a*)	720	Acute arthritis due to pyogenic organisms	2	—	1	—	1	—
(*b*)	721	Acute nonpyogenic arthritis	—	—	—	—	—	—
(*c*)	722	Rheumatoid arthritis and allied conditions	4	1	2	5	1	1
(*d*)	723–725	Arthritis specified and unspecified	—	1	3	2	—	—
A 123		Muscular rheumatism and rheumatism, unspecified:—						
(*a*)	726	Muscular rheumatism	—	—	—	1	1	—
(*b*)	727	Rheumatism unspecified	2	1	1	—	—	1
A 124	730	Osteomyelitis and periostitis	4	5	—	2	1	3
A 125		Ankylosis and acquired musculoskeletal deformities:—						
(*a*)	737	Ankylosis of joint	—	—	—	—	—	—
(*b*)	745–749	Other acquired musculoskeletal deformities	—	—	—	—	—	—
A 126		All other diseases of skin and musculoskeletal system:—						
(*a*)	715	Chronic ulcer of skin (including tropical ulcer)	6	2	2	2	2	1
(*b*)	700–714, 716	All other diseases of skin and subcutaneous tissue	6	9	6	9	8	10
	731–736, 738–744	All other diseases of musculoskeletal system	1	3	—	1	—	3
		Aggregate of Sub-Totals XII and XIII ..	32	36	25	36	38	54
		Carried forward ..	6,757	6,747	6,458	6,767	6,849	7,130

—means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	6,757	6,747	6,458	6,767	6,849	7,130
		XIV.—CONGENITAL MALFORMATIONS						
A 127	751	Spina bifida and meningocele	5	7	9	7	13	6
A 128	754	Congenital malformations of circulatory system	122	69	83	55	75	41
A 129		All other congenital malformations:—						
(*a*)	750	Monstrosity	6	13	16	5	13	8
(*b*)	752	Congenital hydrocephalus	8	10	14	6	6	5
(*c*)	753	Other congenital malformations of nervous system and sense organs	5	2	1	3	1	1
(*d*)	755	Cleft palate and harelip	—	1	2	2	3	1
(*e*)	756.0	Congenital hypertrophic pyloric stenosis	—	1	—	1	4	5
(*f*)	756.1	Imperforate anus	7	4	3	8	4	12
(*g*)	756.2	Other congenital malformations of digestive system	17	15	25	17	17	16
(*h*)	757	Congenital malformations of genito-urinary system	4	5	2	2	3	5
(*i*)	758	Congenital malformations of bone and joint	2	3	—	—	—	—
(*j*)	759	Other and unspecified congenital malformations, not elsewhere classified	18	12	9	9	4	9
		SUB-TOTAL XIV ..	194	142	164	115	143	109
		XV.—CERTAIN DISEASES OF EARLY INFANCY						
A 130		Birth injuries:—						
(*a*)	760	Intracranial and spinal injury at birth	206	165	121	34	51	84
(*b*)	761	Other birth injury	8	2	2	5	2	5
A 131	762	Postnatal asphyxia and atelectasis	141	157	127	109	135	127
		Sub-Total XV *Carried forward* ..	355	324	250	148	188	216
		Carried forward ..	7,306	7,213	6,872	7,030	7,180	7,455

— means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	7,306	7,213	6,872	7,030	7,180	7,455
		Sub-Total XV *Brought forward* ..	355	324	250	148	188	216
		XV.—CERTAIN DISEASES OF EARLY INFANCY—*continued.*						
A 132		Infections of the newborn:—						
(*a*)	763	Pneumonia of newborn	140	103	102	78	99	184
(*b*)	764	Diarrhœa of newborn	58	50	76	114	123	251
(*c*)	765	Ophthalmia neonatorum	—	—	—	—	—	4
(*d*)	766	Pemphigus neonatorum	1	—	—	—	—	—
(*e*)	767	Umbilical sepsis	9	1	1	3	3	2
(*f*)	768	Other sepsis of newborn	4	3	—	1	—	3
A 133	770	Hæmolytic disease of newborn	87	97	93	109	50	146
A 134	769 771–772	All other defined diseases of early infancy	15	18	11	14	22	35
A 135		Ill-defined diseases peculiar to early infancy, and immaturity unqualified:—						
(*a*)	773	Ill-defined diseases peculiar to early infancy	23	44	38	30	47	89
(*b*)	774–776	Immaturity and immaturity unqualified	321	306	404	558	637	514
		SUB-TOTAL XV ..	1,013	946	975	1,055	1,169	1,444
		XVI.—SYMPTOMS, SENILITY AND ILL-DEFINED CONDITIONS						
A 136	794	Senility without mention of psychoses	983	1,029	937	876	722	781
		Sub-Total XVI *Carried forward* ..	983	1,029	937	876	722	781
		Carried forward ..	8,947	8,864	8,534	8,813	8,883	9,464

— means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	8,947	8,864	8,534	8,813	8,883	9,464
		Sub-Total XVI *Brought forward* ..	983	1,029	937	876	722	781
		XVI.—SYMPTOMS, SENILITY AND ILL-DEFINED CONDITIONS—*continued.*						
A 137		Ill-defined and unknown causes of morbidity and mortality:—						
(*a*)	780–789 except 788.8	Symptoms referable to systems or organs	69	601	672	877	964	1,077
(*b*)	788.8	Pyrexia of unknown origin	391	457	279	179	200	320
(*c*)	780.2	Convulsions	377	—	—	—	—	—
(*d*)	782.4	Acute heart failure undefined	93	—	—	—	—	—
(*e*)	793	Observation, without need for further medical care	—	—	—	—	—	—
(*f*)	795.1	Malingering	—	—	—	1	—	—
(*g*)	795.2	Sudden death (cause unknown)	—	—	—	—	—	1
(*h*)	795.3	Found dead (cause unknown)	5	13	12	19	20	23
(*i*)	790–792, 795.0, 795.4, 795.5	Other ill-defined and unknown causes of morbidity and mortality	152	186	257	168	234	159
		Cases pending Coroner's Inquest	61	—	—	—	—	—
		SUB-TOTAL XVI ..	2,131	2,286	2,157	2,120	2,140	2,361
		XVII.—ACCIDENTS, POISONINGS AND VIOLENCE						
		"E" Code: Alternative Classification of Accidents, Poisonings and Violence (External Cause)						
AE 138	E810–E835	Motor vehicle accidents	183	164	122	60	98	124
AE 139		Other transport accidents:—						
(*a*)	E800–E802	Railway accidents	2	5	2	2	1	—
(*b*)	E850–E858	Water transport accidents	2	4	4	1	7	10
		Sub-Total XVII *Carried forward* ..	187	173	128	63	106	134
		Carried forward ..	10,282	10,294	9,882	10,120	10,407	11,178

— means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	10,282	10,294	9,882	10,120	10,407	11,178
		Sub-Total XVII *Brought forward* ..	187	173	128	63	106	134
		XVII.—ACCIDENTS, POISONINGS AND VIOLENCE—*continued.*						
AE 139								
(*c*)	E860–E866	Aircraft accidents	—	8	1	—	36	—
(*d*)	E840–E845	Other road vehicle accidents	1	2	—	1	2	1
AE 140		Accidental poisoning:—						
(*a*)	E870	Accidental poisoning by morphine and other opium derivatives ..	—	1	—	—	—	—
(*b*)	E874	Accidental poisoning by other analgesic and soporific drugs ..	—	—	—	—	—	1
(*c*)	E878	Accidental poisoning by other and unspecified drugs ..	—	—	—	—	—	—
(*d*)	E883	Accidental poisoning by corrosive aromatics, acids and caustic alkalies	—	—	2	3	2	—
(*e*)	E884	Accidental poisoning by mercury and its compounds ..	—	—	1	—	—	—
(*f*)	E885	Accidental poisoning by lead and its compounds	—	—	—	—	1	—
(*g*)	E886	Accidental poisoning by arsenic and antimony and their compounds	—	—	—	1	—	—
(*h*)	E888	Accidental poisoning by other and unspecified solid or liquid substances	5	—	—	1	—	1
(*i*)	E890–E895	Accidental poisoning by gases and vapours	—	—	—	—	—	—
(*j*)	E871–E873, E875–E877, E879–E882, E887	Other accidental poisoning	4	3	6	1	3	26
AE 141	E900–E904	Accidental falls	15	23	27	60	4	2
AE 142	E912	Accident caused by machinery	—	2	1	—	4	—
AE 143	E916	Accident caused by fire and explosion of combustible material ..	2	—	—	—	9	1
AE 144	E917–E918	Accident caused by hot substance, corrosive liquid, steam and radiation	19	13	23	28	14	8
		Sub-Total XVII *Carried forward* ..	233	225	189	158	181	174
		Carried forward ..	10,328	10,346	9,943	10,215	10,482	11,218

— means nil.

APPENDIX V—*continued*

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	10,328	10,346	9,943	10,215	10,482	11,218
		Sub-Total XVII *Brought forward* ..	233	225	189	158	181	174
		XVII.—ACCIDENTS, POISONINGS AND VIOLENCE—*continued.*						
AE 145	E919	Accident caused by firearm	1	4	5	1	1	1
AE 146	E929	Accidental drowning and submersion	54	64	56	63	60	48
AE 147		All other accidental causes:—						
(*a*)	E913	Accidents caused by cutting or piercing instruments ..	1	1	—	—	—	—
(*b*)	E914	Accidents caused by electric current	3	6	5	5	5	3
(*c*)	E920	Foreign body entering eye and adnexa	—	—	—	—	—	—
(*d*)	E923	Foreign body entering other orifice	—	2	—	—	1	—
(*e*)	E924, E925	Accidental mechanical suffocation	—	1	—	1	—	—
(*f*)	E926	Lack of care of infants under one year of age	—	—	—	—	—	—
(*g*)	E927	Accidents caused by bites and stings of venomous animals and insects	—	—	1	—	—	2
(*h*)	E928	Other accidents caused by animals	—	—	—	—	1	—
(*i*)	E931	Excessive heat	—	—	—	—	—	—
(*j*)	E932	Excessive cold	—	—	—	—	—	—
(*k*)	E933	Hunger, thirst and exposure	—	—	—	—	—	—
(*l*)	E934	Cataclysm	—	—	—	—	—	—
(*m*)	E935	Lightning	—	5	1	2	2	—
(*n*)	E936	Other and unspecified accidents	—	—	—	—	94	—
(*o*)	E940. E941	Vaccinia including post-vaccinal encephalitis	—	—	—	—	—	—
(*p*)	E942	Other complications of small-pox vaccination	—	—	—	—	—	—
(*q*)	E954	Anæsthetic accidents	—	—	—	—	1	7
(*r*)	E943–E946 E950–E953 E955–E959	Accidents due to medical or surgical intervention	1	—	—	1	2	1
		Sub-Total XVII *Carried forward* ..	293	308	257	231	348	236
		Carried forward ..	10,388	10,429	10,011	10,288	10,649	11,280

— means nil.

RETURN OF DEATHS BY CAUSES, 1953–58—*continued*

Intermediate List Number	Detailed List Numbers	CAUSE OF DEATH (Intermediate International List, Sixth Revision, 1948)	1958	1957	1956	1955	1954	1953
		Brought forward ..	10,388	10,429	10,011	10,288	10,649	11,280
		Sub-Total XVII *Brought forward* ..	293	308	257	231	348	236
AE 147 (*s*)	E910–E911, E915, E921–E922, E930, E960–E962	XVII.—ACCIDENTS, POISONINGS AND VIOLENCE—*continued*. All other accidental causes	100	110	69	126	2	95
AE 148		Suicide and self-inflicted injury:—						
(*a*)	E970	Suicide and self-inflicted injury by analgesic and soporific substances	3	3	7	6	1	—
(*b*)	E971	Suicide and self-inflicted injury by other solid and liquid substances	20	33	37	44	44	63
(*c*)	E972	Suicide and self-inflicted injury by gases in domestic use ..	—	1	1	—	—	1
(*d*)	E973	Suicide and self-inflicted injury by other gases	1	—	—	—	1	—
(*e*)	E974	Suicide and self-inflicted injury by hanging or strangulation ..	56	75	44	60	51	51
(*f*)	E975	Suicide and self-inflicted injury by submersion (drowning) ..	17	8	11	6	7	18
(*g*)	E976	Suicide and self-inflicted injury by firearms and explosives ..	1	3	7	2	4	5
(*h*)	E977	Suicide and self-inflicted injury by cutting or piercing instruments	5	2	5	3	2	5
(*i*)	E978	Suicide and self-inflicted injury by jumping from high places ..	17	19	12	9	8	11
(*j*)	E963, E979	Suicide and self-inflicted injury by other and unspecified means ..	1	3	7	9	3	4
AE 149		Homicide and injury purposely inflicted by other persons (not in war):-						
(*a*)	E980	Non-accidental poisoning by another person	—	—	—	2	—	—
(*b*)	E981	Assault by firearms and explosives	—	—	3	2	5	6
(*c*)	E982	Assault by cutting and piercing instruments	15	12	6	4	7	9
(*d*)	E964, E983	Assault by other means	13	11	10	12	3	8
(*e*)	E984	Injury by intervention of police	2	1	6	—	—	—
(*f*)	E985	Execution (legal)	—	—	2	—	2	—
AE 150	E965, E990–E999	Injury resulting from operations of war	—	—	—	—	1	—
		SUB-TOTAL XVII ..	544	589	484	516	489	512
		GRAND TOTAL ..	10,639	10,710	10,238	10,573	10,790	11,556

— means nil.